STUDENT KNOWLEDGE OF CURRICULUM LITERACIES AS THEY ENTER HIGH SCHOOL

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Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made."

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Abstract

This research project has explored the knowledge students possess concerning specific curriculum literacies during their first year of high school, and how this knowledge develops as they progress through their studies. In this Design Based Research Project focusing on students' writing and the application of Systemic Functional Linguistics (SFL) across disciplines, the researcher worked with two Year 8 teachers to construct lessons to enhance students' understanding of curriculum literacies in the subjects of Science, English and History. The research highlights there are lack of opportunities to explicitly teach "knowledge about language" within disciplines, and considers implications for disciplinary learning in the future.

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List of Abbreviations

ACARA:	Australian Curriculum Assessment and Reporting Authority
APPA	Australian Primary Principals' Association
C2C	Curriculum into the Classroom
CAR:	Content Area Reading
CLA:	Critical Language Awareness
DBR:	Design Based Research
DETE:	Department of Education, Training and Employment
ELDAC	English Language Development Across the Curriculum
ERICA:	Effective Reading in the Content Areas
HOD:	Head of Department
IEA	International Association for the Evaluation of Educational Achievement
IRE	Initiation, Response, Evaluation
ISQ	Independent Schools Queensland
KAL:	Knowledge About Language
KLA:	Key Learning Area
LAC	Language Across the Curriculum
LOTE	Languages Other Than English
LSK:	Linguistic Subject Knowledge
LTLTR:	Learning to Learn Through Reading
NAPLAN:	National Assessment Plan – Literacy and Numeracy
P-3	Preschool – Year 3
P-10:	Preschool – Year 10
PE	Physical Education
QCAA	Queensland Curriculum and Assessment Authority
PIRLS	Progress in International Reading Literacy Study
RCT:	Randomized Control Trial
SFL:	Systemic Functional Linguistics
SOSE:	Studies of Society and the Environment
TAFE:	Technical and Further Education
TIMSS	Trends in International Mathematics and Science Study

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Chapter 1: Introduction

This chapter introduces the thesis (1.1) and provides background information concerning the research problem. Section 1.2 describes the personal context of the researcher in establishing interest in the research problem, while the broader educational context and impact of changing policies and structures is discussed in Section 1.3. The fourth section outlines the goals of the study, and a brief explanation of the research methodology is provided in Section 1.5. The chapter concludes with a consideration of the significance of the research (1.6), as well as a description of the document's structure (1.7).

1.1 Introduction

This research is representative of a personal and professional interest in students' understanding of curriculum literacies in their first year of high school, and how they develop subject-specific literacies as they progress through school. This interest is derived from nearly twenty years of classroom experiences and a deepening understanding of what constitutes literacy. While in recent years, definitions of literacy have broadened to account for the increasing challenges students have experienced and will encounter in a rapidly changing world, there has been considerable debate concerning how to best prepare students for their futures. This debate is reflected in education policies such as the implementation of the Australian Curriculum in all Key Learning Areas (KLAs), which privileges literacy as a General Capability that students must master if they are to achieve their career and life goals. This thesis outlines how two Year 8 teachers utilise Systemic Functional Linguistics (SFL) in the subjects of English, Science and History to enhance students' knowledge of curriculum literacies in those specific subject domains.

1.2 Context – Professional and Personal Experiences

Throughout my teaching career, the contexts I have worked within have significantly shaped my understanding of literacy, how I view my role as a teacher, and my interactions with learners. These major influences will be outlined in the following section.

1.2.1 Introduction to Literacy

I did not really begin to understand 'literacy' until I was appointed to Thursday Island State High School as English subject Master in 1993. My knowledge of literacy at that time was as extensive as my Geography skills; I had no knowledge of where Thursday Island was. I knew I had to fly there from Cairns, so I found a map of Queensland, located Cairns and worked my way upwards until I found "TI". Unfortunately, as I was soon to discover, my navigational skills were a metaphor for my literacy skills.

Looking back at my experiences on Thursday Island, they were nothing short of deeply profound. From the first day, I felt completely out of my depth – at the time I had five-and-a-half years teaching experience at a Senior College/TAFE (Technical and Further Education) in western Queensland. None of the subjects I had studied could have prepared me for 9D English at TI. Upon receiving my timetable, I was directed to the Year 9 English Coordinator, who enthusiastically told me all about the Year 9 Program. Then, almost as an afterthought, she said "But your class won't be doing any of that."

"Why not?" I asked, bemused.

"Because you have 9D English."

I looked at her blankly and she further explained that classes were streamed and 9D was the lowest-level class, mainly consisting of outer island students – students from the islands surrounding TI. She directed me to the Learning Support teacher, who leafed through a couple of books of activity sheets and said that was as much as I could expect from 9D students. During my 18 months there, I learnt that literacy cannot be found in a book or a series of worksheets; it has to be developed with an understanding of the contexts students live in now and the contexts they can expect to experience in the future, meeting their needs as individuals as well as groups of citizens expected to function in and contribute to society.

1.2.2 Literacy across the Curriculum

Teaching at Thursday Island also represented my first involvement in a Language Across the Curriculum (LAC) program. All teachers participated in the Learning to Read Through Reading (LTLTR) professional development, as part of

the Effective Reading in Content Areas (ERICA) model, which focused on strategies to assist students to effectively read and deconstruct texts within specific subjects. However, the program had limited success as not all teachers accepted it was their responsibility to teach aspects of language within their curriculum areas; many wondered why they had to teach "English" within their subjects. This experience highlighted the importance of teacher "buy-in" or commitment to establishing successful LAC Programs. In my current role, where I have carriage of the school's literacy agenda across all curriculum areas, a supportive school culture where teachers accept responsibility for teaching the literacy demands of their subject areas is integral to the success of any whole-school initiatives.

1.2.3 New Times, New Literacies

It was only years after my 18 months of teaching at Thursday Island State High School that my first real knowledge about literacy and literacy teaching developed. After Thursday Island I spent 15 months at Mitchell State School, a P-10 (Preschool – Year 10) school in south-west Queensland, before taking a number of years of family leave. I returned to work in 2003 in a new role at a large regional high school in Queensland, lacking confidence and feeling incompetent after six years out of the classroom. Educational change had been swift in my absence. In my curriculum area of English there was growing emphasis on critical literacy, and the *Literate Futures Report* (Queensland Government, 2000) had been released. Colleagues were using a language I had not been previously exposed to with words such as *discourses, intertextuality,* and *functional grammar.* One of the first professional development opportunities I experienced was a two-day course focused on the *Literature Futures: Reading* document (Anstey, 2002) , conducted by classroom teachers who were trained as *Literate Futures* Advisers. As well as delivering professional development, these advisers assisted schools in developing Literacy Plans, a systemic requirement for Education Queensland schools. For the first time I felt I engaged intellectually in notions of what literacy was and in concepts of multiliteracies. My new learning reinforced what I had experienced at Thursday Island many years earlier in developing a program for the 9D English class. Rather than develop a program based on the students' deficits – what they could not do – I began with a focus on their strengths. Visual and oral literacies were strengths I identified in the students and employed to enhance their reading and writing skills.

For the first time I felt I had a theoretical basis to not only affirm what I had experienced in the classroom, but to allow a further expansion of my knowledge of literacy practices as more than an ability to read and write.

1.2.4 Knowledge about Language

Another significant learning for me since 2003 has been that explicit teaching of language is integral to student achievement. By explicit teaching, I'm referring to not just the teaching of the structural features of a specific genre that students are expected to produce, but teaching language features as well across all levels of the text: at the text level, paragraph level, sentence level, and word level. Again, this belief has only come about through professional development activities with an emphasis on the practical application of literacy strategies in the classroom. My training as tutor of functional grammar in the *How Language Works* program (South Australian Government, 2011), and involvement in an Action Research Project as part of Education Queensland's *Year 8/9 Literacy Professional Development for Secondary Teachers* (Queensland Government, 2009), has led me to realise that there has been a gap in my teaching. An intensive focus on language features in texts is what has been missing from my teaching through my ignorance and a previous lack of knowledge and skills. It has only been knowledge and skills gained through professional development activities that have enabled me to feel any sense that what I teach is having a positive impact on student learning.

1.2.5 Literacy Professional Development

The professional development opportunities in literacy afforded to me during my career have led to increasing interest in literacy across the curriculum, namely how specific curriculum domains organise and represent knowledge and ways of thinking. In 2008, I worked with English and Science teachers in the school to utilise aspects of Systemic Functional Linguistics (SFL) to develop lessons focused on teaching knowledge of language within their subject areas as part of Education Queensland's *Literacy the Key to Learning: Action Research Project* (Queensland Government, 2009). Sample lessons were filmed and included in the training package for Education Queensland's *Literacy the Key to Learning* (Queensland Government, 2006) five-day professional development for high school teachers. The training package included face-to-face delivery by Regional Literacy advisers, as

well as an online component that could be accessed through *The Learning Place*, Education Queensland's web-based service providing curriculum support materials and electronic learning (e-learning) courses. The worksheets and materials developed during the professional development were included in a booklet for teachers, and they could also view excerpts from lessons online. My experiences in working with staff across different subject areas led to a new role for me as Literacy Coach within the school, where I assist teachers in all faculties in reviewing programs and assessment, and planning lessons focused on explicit teaching of knowledge of language to more effectively align classroom teaching with assessment that is largely comprised of written texts. I also plan and deliver professional development for small groups of staff or whole staff meetings within the school.

1.2.6 Teacher/Student Interactions

In working with teachers across a number of curriculum areas, it has become obvious that in the spoken interactions between teachers and students in high school classrooms, much of the meaning-making concerns "content" knowledge – knowledge of a specific topic – rather than knowledge of how to use language to represent the content. One of the greatest pedagogical shifts that I have witnessed in the teaching staff I work with is the acceptance that they have the responsibility to teach the curriculum literacies of their subject areas, particularly the literacies of the written texts students are largely expected to produce for assessment. Teachers are adopting the realisation that covering "content" means not just studying a particular topic or field of knowledge, but discussing the intended assessment and how students are required to use language to represent specific areas of study in the texts they are required to produce for assessment.

For me, one of the most exciting changes in classroom vernacular in recent years has been the greater alignment between classroom talk and the written texts students are required to produce for assessment, where students will spend time in their subjects considering how knowledge of language is important in their achievement in all curriculum domains. A couple of years ago, one of my senior English students walked into the classroom and promptly told me my influence in the school was becoming too excessive, because he had just spent his Biology lesson doing "English". I had the pleasure of explaining to him that he was not doing "English", but an important curriculum literacy in Biology of how to use language to

represent knowledge in an Extended Experimental Response, the written text he was required to produce for assessment. I said it was not English because we did not study those types of texts in English, and how fortunate he was that his teacher had spent time explaining how to represent knowledge in a difficult but curriculum-specific genre. I have a keen interest in studying these pedagogical shifts in classrooms, where teachers discuss knowledge of language as well as a particular topic of study, and how the interactions between teachers and students can enhance student knowledge and mastery of specific curriculum literacies.

1.3 Context – The Institution of High School and Policy Shifts

Throughout the description of key experiences during my teaching career in the previous section, it is obvious that shifts in my knowledge and practices reflected shifts in government education policies. Greater consideration will now be given to aspects of these policies to provide a deeper understanding of the significance of the research problem in the current educational context. The next section will provide a chronology of major Queensland curriculum reports and documents and how they have shaped understandings of literacy and teaching practices, including my personal experiences. The major emphases of these texts will be discussed, as well the understandings of literacy that are both explicit and implicit (presented at the end of this section in Table 1.1). Firstly, however, attention must be given to the structure of high schools, and how that has impacted upon the implementation of literacy initiatives.

1.3.1 High School Structures

As a student who undertook a postgraduate teaching qualification, I can recall that my study during the mid-1980s was firmly focused on my two discipline areas. Indeed, I found them the most enjoyable and rigorous parts of the course, particularly in planning what should be taught, and how best to impart that knowledge. This belief in the precedence of subject areas and my role as a disseminator of content knowledge is reflected in the dominant secondary school structure of separate departments, constructed around a key discipline of knowledge or subject area. This structure has generally remained unchanged, evident in the staffing of high schools with specialist teachers, and subject "masters" or heads of department. The institution of school cannot be ignored when implementing literacy programs (Moje,

2007) as the structures of secondary school "constrain and support the ways that teachers and students carry out their day-to-day literacy practices" (Moje, 2008, p. 99). Teacher beliefs concerning their roles as disseminators of information has shaped their willingness to incorporate literacy strategies in their classrooms. Part of the resistance to the adoption of literacy strategies, also acknowledged by Moje (2010) was teachers' assumptions "about when and how a literate skill should be learned" – namely – "prior to middle school and high school, to be sure" (p.111). These assumptions made by teachers about learners, coupled with "deeply instantiated subject-matter epistemologies" has "made it difficult for secondary teachers to assign value to the integration of literacy strategies into their departments" (Moje, 2010, p. 111). This is evident in the adoption of Content Area Reading (CAR) strategies during the 1980s and 1990s, as is outlined in the next section.

1.3.2 Content Area Reading

During my teacher training and early years of teaching, content literacy was espoused; more specifically, "the ability to use reading and writing to learn subject matter in a given discipline" (Vacca & Vacca, 2002, p. 15). As such, our pre-service training focused on content area reading education, which "tends to emphasise the teaching of a generalist set of study skills across content areas for use in subject matter classes" (Shanahan & Shanahan, 2012, p. 7). The "earliest" (Stewart-Dore, 2007) content area program supported by schools and teacher-training institutions was the *Effective Reading in the Content Areas* (ERICA) program (Morris & Stewart-Dore, 1984). The ERICA strategies were designed to support students' reading and understanding of printed material – mainly grade-level texts – that were regularly used in classrooms (Stewart-Dore, 2007). The strategies were organised into four stages according to their purpose: Preparing for Reading; Thinking through Reading; Extracting and Organising Information; and Translating Information. A complementary program developed around the same time – the *English Language Development Across the Curriculum* (ELDAC) project (Houston, 1989) – was designed to support English-language learners. Perhaps the most significant aspect of programs such as ERICA and ELDAC was that teachers in all discipline areas were expected to take responsibility for teaching the strategies within their content areas. This also perhaps represented the greatest challenge concerning the success of

these programs – that even if teachers received professional development in these programs, as occurred at Thursday Island with all staff, they would only enact the strategies if they accepted they had a responsibility to do so. The Content Area Reading strategies of the 1980s and 1990s have proved to be successful in "a plethora of studies" but "have made no great headway in schools" (Shanahan & Shanahan, 2012, p. 14) . My own anecdotal experiences support this, as amongst current staff only those who have worked in remote schools – particularly schools with a large proportion of indigenous students – seem to have a knowledge of ERICA or ELDAC strategies. For those staff who have mainly worked in urban or large regional centres, perhaps there was the belief, as has been suggested by Shanahan and Shanahan (2012), that reading is a skill that students learn in primary school, and that content area reading programs are best-suited to the needs of English language learners. Content Area Reading programs have also made "no great headway" in teacher training institutions (Shanahan & Shanahan, 2012, p. 14), with a "significant body of research" showing pre-service teachers have been "sceptical about the efficacy of teaching and learning strategies offered by content area research, rarely enacting the strategies in their classrooms" (Moje, 2008, p. 98). According to Moje (2008), reasons given by pre-service and practising teachers for the non-inclusion of literacy strategies in their classrooms was that the strategies were time-consuming, and placed an unfair burden on them to teach reading, rather than content. Content area programs continue to a focus in schools today, with programs such as the STEPS Tactical Reading professional development for teachers of middle school students (STEPS, Professional Development 2009). However, it is more of a school-based decision concerning whether such programs should be adopted, rather than a systemic requirement.

1.3.3 The 'Competency Movement' of the 1980s and 1990s

Emphasis on Content Area Reading strategies during the 1980s and 1990s was reflected in debate concerning skills required by students to be successful learners, and more importantly, to be successful in securing employment. The *Report of the Select Committee on Education in Queensland* (Queensland Legislative Assembly, 1980), chaired by Mike Ahern, claimed that their study was the first major investigation into the structure of education in Queensland since it was first established in the 1880s. The committee acknowledged that their review was

commissioned in the context of a "dramatic increase" in the unemployment rate for 15-19 year olds at that time, and concern from employers about basic standards in numeracy and literacy (Queensland Legislative Assembly, 1980). There were six reports presented to parliament, with Literacy and Numeracy the focus of the Third Interim Report, presented to parliament on 29 May 1979. Reference was made to Australia's standing in the global education context, noting that Australian students were "on-par" with students in other English-speaking countries, and at that time, Queensland students outperformed students in other states in reading and writing. However, the report argued despite these results, standards had not kept pace with social and economic needs, and "threshold levels of education necessary for effective participation in today's society have risen" (Queensland Legislative Assembly, 1980. p. 4) .

The *Select Committee on Education Report*, also known as the *Ahern Report* (Queensland Legislative Assembly, 1980) identified three issues in raising education standards – especially numeracy and literacy – in schools: providing assistance to teachers in evaluating the effectiveness of different teacher practices; the problem of individual screening, diagnosis and remediation; and teacher education. The assertion that efforts concerning numeracy and literacy should be concentrated in the first years of schooling, supports a view of literacy shared by a number of secondary teachers, as noted by Moje (2008) in the previous section, that literacy is the responsibility of teachers in the early years. With use of the words "diagnosis" and "remediation", it also privileged a view that literacy can be easily tested and quantified, and that if students do not meet standards, intervention must occur early if a child is to have any chance of future success. There was no specific pre-service or professional development program recommended for literacy intervention. Just over half of the recommendations of the report centred on the administration and organisation of schools, with most of the secondary school recommendations concerning curriculum offerings and pathways beyond post-compulsory education, as well as a broad range of skills students needed for employment. Therefore, within this economic, social and educational context, content area professional development programs such as ERICA and ELDAC supported the belief that a focus on general skills that students could apply across a number of areas, could assist them to be

more successful in school. It was believed with greater success in school, students would be more employable when they completed their formal school education.

A common theme in educational reports and documents of the 1980s and 1990s was preparing students for the challenges of an increasingly unpredictable, technological world. The emphasis on organisational structures and senior curriculum offerings continued in the *Queensland Department of Education: Education 2000 – Issues and Options for the future of education in Queensland* (Queensland Government, 1985). The seventy-four page discussion was mainly concerned with curriculum development and how that was impacted upon by organisational dimensions of each sector, focusing on improvement of continuity of educational programs across Years 1-10, particularly the primary-secondary transition, and post-compulsory education (Queensland Department of Education, 1985). The interesting aspect of this discussion paper, which was later realised in changing school structures, was the suggestion that teachers should be involved in broader aspects of specialisation, specifically early-middle childhood; middle childhood – adolescence; adolescence – adulthood. This implied that students would be at an advantage if they had teachers trained in broader aspects of the curriculum rather than more specific specialisations. New curriculum structures were evident in my first teaching appointment to the College of the South West in Roma in 1987. Roma was the first area in the state to undergo a restructure of schooling to fit the model proposed by the discussion paper, establishing a P-3 (Preschool – Year 3) campus at the primary school – The Roma Junior School; a purpose-built Year 4-10 campus – The Roma Middle School; and a Senior College/TAFE – The College of the South West – positioned at the "old" high school. Carriage of instruction of skills in numeracy and literacy, like the *Ahern Report* (Queensland Legislative Assembly, 1985), was considered to be the responsibility of P-3 teachers, chartered with ensuring students achieved a desirable standard in "basic learning skills" (Queensland Government, 1985, p. 9).

Following on from the *Education 2000 Discussion Paper*, the *P-10 Curriculum Framework, Queensland*, by the Queensland Department of Education, 1987, promulgated a new structure for curriculum design and development for P-10 at both the system and school level. Key words were "responsiveness" to a changing

world and "continuity of learning". One of the major emphases of the report was that children's ability to participate effectively in society was dependent on their ability to communicate in English (Queensland Government, 1987). It stated the dominant purpose of education was a "sound general education" (p. 3) which reinforced the move to broader areas of specialisation promoted by the *Education 2000 Discussion Paper* (Queensland Government, 2000). Literacy was viewed as a "functional competency", supporting the view of literacy as a set of skills that could be applied to all areas and assist students to secure future employment. Also, "Language" rather than "English" was recommended as a Core Learning Area, suggesting that language was not part of other disciplines.

Recommended curriculum changes put forward in the *P-10 Curriculum Framework* (Queensland Government, 1987) were not enacted until 1995, after release of *Shaping the Future: Report of the Review of the Queensland School Curriculum Vol 1* (Queensland Government, 1994), chaired by Professor Kenneth Wiltshire. Terms of reference not only included curriculum development, management, assessment and accreditation, but also the most effective forms of remedial intervention in literacy and numeracy (Queensland Government, 1994). Part of the research brief was also the relationship between schooling and the basic skills required for employment. The report represented a shift away from what it called the "competency movement", which it described as "an inadequate base upon which to construct a school curriculum" (Queensland Government, 1994, p. 20). Knowledge was promoted as central to curriculum, with the report acknowledging that "society has assigned schools a special role with respect to the acquisition of knowledge and meaning" (Queensland Government, 1994, p. 19). This focus on creating meaning, not just acquiring knowledge, was evident in the assertion that the "critical important skills" (Queensland Government, 1994, p. 89) of numeracy and literacy should be developed across all levels of schooling and the curriculum. It stated that language had a role to play in all learning and should be recognised in syllabuses. It was during this era that all Queensland Board of Secondary School Studies Syllabuses were required to include Literacy and Numeracy statements. As well as the restructuring of all syllabuses to ensure there was greater consistency in design, changes to reporting frameworks were suggested, and consideration given to essential as well as elective learnings. The significance of the *Wiltshire Report*

(Queensland Government, 1994) was that it laid the foundation for changes not only in curriculum structures and offerings, but understanding of the essential knowledge and skills students needed for the future, including a focus on literacy and numeracy across all year levels and across all subjects.

1.3.4 Literacy in the Disciplines

Secondary literacy programs during the 1980s and 1990s privileged reading over writing and were derived from "the standpoint of literacy theory, rather than from the standpoint of disciplinary learning theory" (Shanahan & Shanahan, 2012, p. 99). A common theme across documents during this period was the challenges students, teachers and systems faced in meeting the demands of a rapidly changing world, with new forms of communication requiring new skills. Thus emphasis shifted from the acquirement of a general range of literacy skills, to the development of specific literacies in specific subjects across specific phases of schooling. This shift represented a foregrounding of the disciplines in teaching and learning, as described by Moje (2008):

> Disciplinary learning is a form of critical literacy because it builds an understanding of how knowledge is produced in the disciplines, rather than just building knowledge in disciplines. (p. 97)

Central to the foregrounding of disciplines in the development of students' literacy capabilities was the change in understandings and definitions of literacy.

1.3.5 Creating Literate Students for Literate Futures

The *Literate Futures: Report of the Literacy Review for Queensland State Schools* (Queensland Government, 2000), has been a key document in not only influencing a change in definitions of literacy, but pedagogy as well. At the core of the document is the understanding:

> Literacy is the flexible and sustainable mastery of a repertoire of practices with the texts of traditional and new communication technologies via spoken language, print and multimedia. (Queensland Government, 2000, p. 2)

The aim of the document was to provide "principled, research-based frameworks for guiding the development of whole-school literacy programs and effective literacy practices" (Queensland Government, 2000, p. 5). It proposed a strategy that reinforced literacy as "core business" in "every classroom, every subject area, and

every school" (Queensland Government, 2000, p. 5). *Literate Futures* (Queensland Government, 2000) represented an attempt to develop not only a common understanding of literacy, but a common purpose amongst schools and teachers, as the "extensive and eclectic" literacy policies and practices that had been developed meant "efforts are at risk of losing their way" (Queensland Government, 2000, p.7). The report also acknowledged there needed to be more effective use of data, responding to "the ongoing under-provision to particular groups of students" (Queensland Government, 2000, p. 7), such as boys, socioeconomically disadvantaged students, students for whom English was not a first language, and in some cases, non-urban students. The professional development focus was on reading, supported by the *Literate Futures: Reading* (Anstey, 2002) document. Key staff were trained in the document and expected to inservice staff back in schools, so the strategy was dependent upon schools giving a priority to literacy.

The goals of the *Literate Futures Report* (Queensland Government, 2000) were reinforced and extended in the document *Literacy – the Key to Learning: A Framework for Action* 2006-2008 (Queensland Government, 2006) for Queensland schools. The Framework outlined practical strategies in the areas of teaching, learning, the curriculum and leadership to extend students' repertoires of literacy skills, with a major emphasis on improving teacher quality:

> It is the quality of teaching that makes the biggest difference to students' literacy outcomes, across the phases of learning. (Queensland Government, 2006, p. 2)

Five-day professional development packages were tailored to meet the needs of specific specialisations of teachers: P-3; Years 4–7; and secondary teachers. Staff at our school also participated in a 2009 Action Research project through Education Queensland, where secondary teachers across all subject areas were filmed engaging in a range of literacy practices. Schools, under the leadership of Heads of Department, self-nominated to be part of the project, and the footage and texts collected were included in the professional development package. Regional Literacy Managers and Advisors were appointed to deliver the training, which was compulsory for all teachers from P-7. For secondary teachers – the last group to be inserviced in 2010 – the number of staff trained depended on the number of staff in each school, as it was more difficult to provide teacher relief for secondary teachers

than primary teachers. The package introduced teachers to aspects of functional grammar, with an emphasis on students' writing improvement, representing a marked change in priority from reading to writing. The aim of the professional development was for all teachers to take responsibility for the literacy learning of all their students (Queensland Government, 2006). This professional development has been influential in changing teaching practices and engaging teachers in the acceptance that they all have a responsibility for teaching literacy. However, the funding for the program ceased at the end of 2010, and teachers and Regional Managers and Advisers involved in the project returned to their schools.

The current document guiding curriculum development and understandings of literacy in Queensland schools is Queensland's Department of Education, Training and Employment publication - *United in our pursuit of Excellence: Agenda for Improvement 2012-2016* (Queensland Government, 2012*).* This document provides the overarching direction for a number of systemic priorities and policies to guide Queensland schools in the near future. The document states the government, along with teachers and schools, is committed to the core priorities of Reading; Writing, including Spelling, Grammar and Punctuation; Numeracy; Science; Attendance, retention and transition of students; and Closing the Gap between indigenous and non-indigenous students (Queensland Government, 2012). It is interesting to note that Numeracy remains a target, whereas 'Literacy' now seems to be more specifically identified as reading, writing, spelling, grammar and punctuation. The delineation of literacy into these specific categories reflects the areas of testing under NAPLAN (National Assessment Plan – Literacy and Numeracy) testing requirements. Focus is on improvement, and it should be the "collective commitment" of all teachers to "an unrelenting focus on student achievement" (Queensland Government, 2012, p. 1). Data is to be the basis of improvement, and it is implied that this data is not just school data, but national testing data as well. While literacy continues to be a core priority, particularly since 2000 with the *Literate Futures Report* (Queensland Government, 2000), there is no mention of mulitiliteracies, and there seems to be a shift back towards more generalist skills of reading and writing, rather than reading and writing within specific subject domains.

The Australian Curriculum Assessment and Reporting Authority (ACARA) emphasises Literacy as a General Capability (2014a) that must be developed across all phases of learning, and across all subject areas. It identifies literacy as an essential skill for learning both in school and the broader community and affirms that literacy is to be the responsibility of every teacher (ACARA, 2014a). Distinction is made between general skills of comprehending and constructing texts and the more distinctive subject specific literacies students need to develop if they are to be successful in their schooling. ACARA has begun the process of identifying specific literacies in the subjects of English, Mathematics, History and Science in a Literacy Continuum they have developed across the stages of schooling.

1.3.6 Section Summary

This section has provided an overview of some of the major educational policies that have shaped literacy knowledge and practices in Queensland schools in the last 25-30 years. It highlighted how concern about literacy in the 1980s and 1990s could be linked to broader economic and societal changes, particularly employment uncertainty and employer concern about basic skills. During this era, literacy was viewed as a competency students should acquire through content area programs that focused on the acquisition of a broad range of skills that could be applied to any learning context or subject. During the latter years of the 1990s, there was a shift to considering how students should not just be competent in a range of skills, but critical thinkers to prepare them more effectively for an increasingly complex world. The *Literate Futures Report* (Queensland Government, 2000) challenged long-held understandings of literacy by exploring the impact of rapidly changing technologies on the communication practices of current and future societies. It defined literacy as "the flexible and sustainable mastery of a repertoire of practices with the texts of traditional and new communications technologies via spoken language, print and multimedia" (Anstey, 2002, p. 52). It prompted the development of a specific pedagogical framework and teacher professional development package based on application of the Functional Model of Language in the classroom. Literacy continues to be a priority of both the national and state governments in current policy documents, although they represent different understandings of what literacy is. National curriculum documents refer to the importance of subject specific

literacies, whereas state government documents focus on reading and writing more broadly across phases of learning and the curriculum.

Policy/Document	Brief	Major Emphases	Literacy Focus
Report of the Select Committee on Education in Queensland , 1980. (The Ahern Report)	• To enquire into Queensland's education system and extent to which it meets expectations of students, parents and the community. • Efficiency and adequacy of secondary school curriculum • Appropriate emphases in primary education between basic skills and other aspects of schooling • Technical and Further Education	• 46 of the 90 recommendations focused on organisation and structure of schooling • 22 recommendations related to secondary schooling, including post-compulsory options. • 7 recommendations about preschool, concerned with class sizes and basic skills	• Separate Literacy and Numeracy report • Concern about students' lack of basic skills and employability • 3 proposals in raising educational standards: - Evaluation of teacher practices - Intervention and remediation of students in early years - Raising standards of pre-service teachers
Education 2000: Issues and Options for the future of Education in Queensland, 1985. Discussion paper	• Review of organisational and operational efficiency of Education Department in four key areas: - Curriculum development - Staff preparation and management - Decision-making and communication - Structure of educational institutions	• Improvement in continuity between all sectors of schooling, especially primary – secondary. • Recommended teachers involved in broader areas of specialisation: - P-3 - Years 4-7 - Years 11 & 12, and post-compulsory	• P-3 considered to be main functional grouping to ensure students achieved appropriate standards in basic skills, including numeracy and literacy
P-10 Curriculum Framework 1987 Discussion paper	• Provide structure for curriculum design and development for P -10 at both system and school levels	• Continuity of learning • Core curriculum in 7 areas: - Arts - Health and Physical Education - Mathematics - Science - Language - Religious Education	• Literacy viewed as "functional competency" • "Language" an area of study, rather than "English". Implied Language was to be taught as a separate subject, not as part of Key Learning Areas.

		- Social Education	
Shaping the Future: Report of the Review of the Queensland School Curriculum Vol 1, 1994 (Wiltshire Report)	• Curriculum development, management, assessment and accreditation • Content and scope P-12 curriculum • Relationship with National Curriculum developments • Most effective forms of remedial intervention in numeracy and literacy • Relationship between schooling and basic skills required for employment	• Knowledge and meaning-making the centre of learning • Competencies inadequate in preparing students for lifelong learning: needed to develop higher-order skills such as critical thinking • Inconsistencies between syllabuses • Advocated core curriculum organised in KLAs • Argued Queensland should participate in a National Curriculum	• Noted importance to society of high levels of numeracy and literacy • Called for strong commitment on part of school to ensure all students attained highest possible levels • Recommended early-age identification and intervention • Teachers across all phases and subjects to take responsibility for teaching literacy
Literate Futures: Report of the Literacy Review for Queensland State Schools, 2000	• Outline a literacy strategy to be able to meet current and future demands • Need consistency and direction	• New understandings of literacy to meet changing times • Proposed literacy strategy • Quality professional development and more effective use of data	• Literacy a repertoire of practices • Literacy must be sustainable and flexible • Multiliteracies • Literacy core business for teachers and schools
Literacy – the Key to Learning: Framework for Action 2006 - 2008	• Practical strategies to achieve the goals of the *Literate Futures* report	• Four major emphases: - Literacy teaching - Literacy learning - Literacy in the Curriculum - Literacy leadership	• Focus on actions, particularly in the area of teacher professional development • Developed five-day professional development programs for teachers across all phases, based on understandings of SFL.
United in our pursuit of excellence: Agenda for Improvement 2012-2016	• Overarching framework for a number of systemic priorities and policies	• Established core priorities, including numeracy, reading and writing. • Focused on improvement through teaching, student outcomes, school community partnerships, and principal leadership	• Numeracy used as a term. • 'Literacy' replaced by Reading and Writing, including spelling, grammar and punctuation. • These categories reflect NAPLAN testing categories • Multiliteracies not a focus. Shift to more general content area skills such as comprehension,

Australian Curriculum, Assessment and Reporting Authority(ACARA): General Capabilities	• Literacy as a General Capability to be developed across all phases of learning and all subjects.	• Literacy is the responsibility of every teacher.	• Notes broad literacy skills and subject specific literacies students need to develop to be successful in schooling.

Table 1.1: *Chronology of major policy documents in Queensland and their emphasis on literacy*.

1.4 Aims of the Study

The overarching goal of this project is to provide insight into what knowledge Year 8 students have developed concerning curriculum literacies specific to the subject areas of English, History and Science, and what practices can enhance students' knowledge of those literacies. Firstly, it investigates the knowledge of curriculum literacies students possess in their first year of high school. Secondly, it considers how students traverse the curriculum in their day-to-day school lives, and whether for some it is difficult to move from subject to subject, with the associated shifts in meaning they have to make. Thirdly, the research hopes to determine whether the application of a functional language approach in the teaching of writing in a number of subjects concurrently can impact positively on student learning.
The purpose of the study is determine whether explicit teaching of writing in three subjects concurrently can assist students in their written assessment, the dominant form of formal assessment in high schools (Freebody, 2013b). The teachers involved in the project will be working within national, state and school developed curriculum plans, so the focus will not be on the suitability of particular topics of study in specific disciplines. What will be the focus is developing learning experiences and practices to enhance students' knowledge of curriculum literacies, specifically in writing, working within set curriculum guidelines and assessment.

1.4.1 Research Questions

The research questions posed by this study are:

- What knowledge of curriculum literacies do students have in their first year of high school and how does that knowledge develop?
- How do students manage the "semiotic-shifting" from one subject to another throughout a school day?

- Does the explicit teaching of writing, particularly through a functional language approach in a number of subjects concurrently, have a positive impact on student learning?

1.5 Research Methodology

A Design-Based Research (DBR) approach was taken in this study, focusing on the teaching of subject-specific literacies in the subjects of English, History and Science in a Year 8 class during one term. In my role as Literacy Coach in a large, regional high school, I worked with a teaching team of two Year 8 teachers, who were the "core" teachers for a Year 8 class. This meant one teacher taught English and History to the class, with the other teacher responsible for teaching Maths and Science. Together we applied a functional language approach to the teaching of specific curriculum literacies in the core subjects to determine whether this approach could enhance students' discipline knowledge. Data collected included observations, field notes, video recordings of lessons, interviews with students, and students' texts. This data was collected throughout the term of study, and reviewed and adapted as the units of study progressed, in accordance with the iterative processes that were an important aspect of Design-Based Research. The Functional Model of Language and Appraisal framework were adopted in planning appropriate learning episodes across the three disciplines of study, with an emphasis on the development of students' writing. The application of DBR methodology, as well as the Functional Model of language, aimed to provide practitioners and researchers with further insight into how students' knowledge of the literacies privileged in specific domains, particularly writing, can be further enhanced, with increasing success at school.

1.6 Significance of the Research

The research into student knowledge of curriculum literacies is significant for a number of reasons:

1. Under Australian curriculum guidelines, literacy is a 'General Capability' to be developed across all phases of learning, and all subjects. Whilst the General Capability statements (ACARA, 2014a) broadly outline what literacy is, and why it is the responsibility of every teacher, the statements do not outline how literacy is to be developed. The study will provide

teachers with practical knowledge of how they can enhance knowledge and understandings of literacy within the specific disciplines of English, History and Science.

2. The study adds to the small but growing body of knowledge concerning the application of Systemic Functional Linguistics and Appraisal theory in classrooms, providing practical examples that can be adapted for application in other school contexts and by teachers in high school English, History and Science.

3. The study, with its focus on concurrent development of curriculum literacies in three subjects, has provided insight into how high schools can coordinate planning across a number of curriculum areas to enhance students' learning, a much-needed area of study. Most studies of curriculum literacies in high schools have explored development of curriculum knowledge in a single area, not multiple subjects at the same time (Myhill, 2010).

4. The study has provided further insights into high school curriculum areas, as early childhood and primary school studies dominate literacy research (Freebody, 2007). In doing so, the study highlights some of the current internal and external school factors that impact on curriculum delivery and student learning.

5. The study has contributed to understandings of how students' knowledge and mastery of writing can be enhanced through practical classroom examples, particularly the use of examplars. There is very little research concerning students' development of writing in high schools; most studies to date have focused on reading (Christie and Derewianka, 2008).

6. The study has privileged the views of an under-represented group in research: students (Moje, 2007). It has focused on student knowledge and understandings of literacy in their own words, through interviews and analysis of student documents.

The overarching significance of the research is that it provides insight into contexts, theories and practices, and skills development, that have been under-represented in research: namely, the contexts of high school and high school subjects; Systemic Functional Linguistic Theory and its application in the classroom; students' viewpoints concerning curriculum literacies; and students' development of writing skills, the dominant form of assessment in high schools.

1.7 Structure of the Thesis document

Chapter 1 provides insight into how interest in this research project developed, through an exploration of the researcher's personal background and the policies that have impacted on understandings of literacy during the last 25 years. A review of empirical studies concerning literacy development in specific disciplines in high school contexts is provided in Chapter 2. The theoretical perspectives that support that study are outlined in conceptual framework for the study in Chapter 3. Further explanation of Design-Based research, the chosen methodology for this study, is presented in Chapter 4. In Chapter 5, the context of high school and the planned curriculum will be presented, including the units and assessment completed during a term in the Year 8 subjects of Science, History and English. Chapter 6 focuses on the enacted curriculum and students' assessment responses in each of the three subjects, also outlining the interventions that occurred in the explicit teaching of writing in each subject. Chapter 7 further explores students' perceptions of their learning and considers implications for future research.

Chapter 2: Literature Review

This chapter reviews empirical studies reported in literature exploring key aspects of the study, including how literacy is understood and represented in high school contexts, as well as how knowledge of language - especially writing - is developed within specific subject disciplines. The introductory section (2.1) presents the high school context and why the research problem is significant for practitioners in the current educational climate. Review of empirical studies is then divided into two sections – Section 2.2 evaluates research literature concerning conceptualisations of literacy in high schools and high school subjects, whereas Section 2.3 explores empirical studies relating to student knowledge of language, grammar and writing. The chapter concludes with a summary in section 2.4.

2.1 Introduction

In high schools across Australia, students move between subjects a number of times a day, "trying to manage and produce diverse ensembles of meaning-making systems on demand" (Freebody, 2007, p. 64). Differences between secondary disciplines are accentuated by timetable divisions resulting in "the slicing up of the secondary school day into neatly bounded subject matter bites" (Moje, 2007, p. 3). Despite moving between subjects being a well-established practice in secondary schools, there is "no research tradition" focusing on how students respond to the "potentially fragmenting everyday multimodal practices "of the school timetable (Freebody, 2007, p. 64):

> What this means is that the distinctive ways in which each curriculum domain puts literacy to work are not generally presented as problems for pedagogy. (Freebody, 2013a, p. 5)

Students encounter a major challenge in how to simultaneously coordinate different literacy modes such as print, oral and visual, but to also "switch among linguistic skills, knowledges and discourses, judging those that are appropriate in each case" (Wyatt-Smith & Cumming, 1999, p. 2). In managing their daily timetables:

> It's almost as though students need a meta-course of how to adapt literacy strategies to specific disciplines, so that they know which tools to bring, and

> which to leave behind as they move from class to class. (Billman & Pearson, 2013, p. 27)

As students move from class to class, and subject to subject, the practices they encounter in specific classrooms may appear to be the "artefacts" of groups of students or teachers rather than a result of disciplinary thinking or cultural practice (Moje, 2007, p. 3). With the implementation of the Australian curriculum in the subjects of English, Mathematics, Science and History from 2012, there is an urgent need for the establishment of a "research tradition" in this "semiotic-switching by students and teachers across the school day" (Freebody, 2007, p. 64), particularly as "all teachers are responsible for teaching the subject-specific literacy of their learning area" (ACARA, 2014c, p. 1). However, the traditional hierarchical organisation of secondary schools "often specifically mitigates against whole-school cross-curriculum initiatives" (May & Wright, 2008, p. 370) that require all teachers to teach the literacy demands of their subject areas. It is within this context that the place of literacy in high schools will be considered, with particular interest in how knowledge of language can assist students in the development of specific curriculum literacies.

2.2 The Place of Literacy in High School Contexts

This section will begin with a review of the place of literacy in the Australian Curriculum and the implications for students and teachers (2.2.1). Section 2.2.2 focuses on the organisation and structure of high school and research that evaluates its impact on literacy development. Studies exploring understandings of disciplinary literacy will be critiqued in Section 2.2.3, followed by consideration of how Critical Language Awareness (CLA) and awareness of Discourses has influenced concepts of disciplinary literacy (2.2.4). A summary of the literature will then be provided (2.2.5).

2.2.1 Literacy in the Australian Curriculum

The development of specific curriculum literacies is regarded as a critical goal for all Australian students if they are to succeed in their schooling, as outlined in the Melbourne Declaration on Education Goals for Young Australians (2008):

> Success in any learning area depends on being able to use the significant, identifiable and distinctive literacy that is implied for learning and representative of the content of the learning area. (MCEETYA, 2008, p. 1)

Not only is literacy given emphasis as a distinct strand in the Literacy and Language strands of the *Australian Curriculum: English* (2014b), it is also a General Capability that "should be applied in all learning areas" (ACARA, 2014a, p. 9). In the Australian Curriculum, General Capabilities:

> …comprise an integrated and interconnected set of knowledge, skills, behaviours and dispositions that students develop and use in their learning across the curriculum, in co-curricular programs and in their lives outside school (ACARA, 2014a, p. 5).

The privileging of literacy within the Australian curriculum reflects that "students' learning is comprehensively and unrelievedly dependent on the development of their literacy capabilities" (Freebody, Barton, & Chen, 2013, p.304). While the *Australian Curriculum: English.v4.2*, acknowledges that much of the "explicit teaching of literacy" occurs in the subject of English, "it is strengthened, made specific and extended in other learning areas as students engage in a range of learning activities with significant literacy demands" (ACARA, 2014c, Literacy Across the Curriculum).

2.2.2 Literacy across the Secondary Curriculum

The "curriculum specific resources" students require if they are to successfully navigate their way through secondary schooling "are under-represented as focal points for theory, research, policy and practice, particularly their growing specificity" (Freebody, Barton, & Chen, 2013, p. 304). The work in Australian classrooms is characterised by "increasing differentiation among curriculum areas in literacy demands" (Freebody, 2007, p. 2) as school years progress, a point also reiterated in the *Australian Curriculum: Literacy – Introduction* (2014c), which emphasises the increasing complexity and cognitive demands of schooling. Implementing policies that support literacy across the curriculum in all subjects "often seems like an uphill, sometimes overwhelming battle" (May & Wright, 2008, p. 370) largely due to the "clearly demarcated subject orientation of secondary

schooling" (May & Wright, 2008, p. 374). This demarcation has led to a separation of "literacy development and curriculum learning" (Freebody, Barton, & Chen, 2013, p. 305) where there has been "privileging of curriculum content over pedagogical process" (May & Wright, 2008, p. 374) largely ignoring the distinctive literacy demands of specific subjects. There is a need to conceptualise literacy within high school subjects or "disciplines", which are the "frameworks for acting on experience and expanding understanding and practice" (Freebody, 2007, p. 62). This "curriculum literacy awareness" (Freebody, 2007) is also supported within the Australian Curriculum:

> …as students engage with subject-based content, they must learn and access and use the language and visual elements in the particular and specific ways that are distinctive and valued modes of communication in each different curriculum area. (ACARA, 2014c, p. 1)

With the implementation of the Australian curriculum, there is a need to not only research how teachers teach "about the conventions of language and texts patterns within their own learning areas" (ACARA, 2014a, p. 14), but how students manage "semiotic shifting" (Freebody, 2007, p. 64), between subjects. As Derewianka (2012) notes, there is "need for large-scale, rigorous research into the benefits or otherwise of an explicit knowledge about language, identifying which features in particular contribute to student literacy outcomes at different ages/stages, and the extent to which the learning is durable and transferable" (p. 141).

2.2.3 Disciplinary Literacy

The challenges of an increasingly technological and rapidly changing world, particularly in terms of communication, has seen growing research interest in disciplinary literacy, in favour of generalist content area instructional strategies. Moje (2007) has noted there has been "a long history of research" in content area instruction stemming from the work of Harold Herber (1970), focusing on students developing repertoires of cognitive strategies they could apply to texts as they progressed through school. The major premise underlying content area strategies, such as the Content Area Reading programs ERICA and STEPS Tactical Reading, is that "the cognitive requirements of learning and interpreting any kind of text, are pretty much the same, no matter what subject matter (Shanahan & Shanahan, 2012,

p. 8). Proponents of content area strategies often refer to this approach as reading to learn, arguing that literacy instruction needs to shift from learning to read and write in the lower grades, to reading and writing to learn in the middle years, particularly in high school (Moje, 2007). In content area programs and texts, the same tools are considered appropriate, regardless of the discipline, when practice shows that some tools better serve some subject areas than others (Johnson and Watson, 2011). Under a content area approach to literacy, it is believed that students' application of the strategies to extract information from texts will enhance their learning and retention of content (Fang, 2012a). In a review of literacy teaching conducted in 2007, Moje noted that while some studies have demonstrated positive effects of application of specific generic content strategies on student learning, the transfer of strategies across subjects has not been addressed. In addition to this, it seems that a significant feature of Herber's (1970) work has been lost in translation to the classroom, with his premise that content determines process not featuring in professional development programs (Gillis, 2014). Thus the focus in content area programs has been on the application of strategies without consideration of their appropriateness to the content being studied (Gillis, 2014). Despite content area approaches still being advocated in many schools, they tend to overlook the practices, language and demands of specific disciplines that become increasingly complex as students progress into their senior years of high school.

In recent years there has been a shift from content area literacy to disciplinary literacy, to "embrace an emphasis on discipline-specific practices that promote simultaneous engagement with disciplinary language and disciplinary content" (Fang, 2012a, p. 19). The shift in focus to disciplinary literacy has occurred in recognition of the largely ineffectual expectation that content teachers will automatically realise the advantages of literacy strategies and assimilate them in their teaching (Bean & O'Brien, 2012). Proponents of disciplinary literacy have also demonstrated how emphasis on content area literacy has "lacked an understanding of and appreciation for the traditions and practices within the disciplines" (Bean & O'Brien, 2012, p. 275). Disciplinary literacy has been defined by Fang (2012a) as "the ability to engage in social, semiotic and cognitive practices considered consistent with those of content experts" (p. 19). This approach is based on the belief that "deep" knowledge

of a discipline is best developed by engaging in the literate practices utilised by experts in the discipline" (Johnson &Watson, 2011, p. 102). A disciplinary literacy approach emphasises "the specialised knowledge and abilities possessed by those who create, communicate and use knowledge within each of the disciplines" (Shanahan & Shanahan, 2012, p, 7), and regards that different types of texts requires reading and writing skills to be applied in different ways:

> learning in secondary disciplines – or content areas – is shaped by reading and writing that learners do in those disciplines. Moreover, reading and writing in disciplines is shaped by the unique conceptual, textual and semantic demands of each area. (Moje, Dillon, & O'Brien, 2000, p. 165)

Thus, disciplinary literacy sees the major differences between subjects as the practices that produce knowledge, whereas content area approaches "treat content differences as the major distinction among the disciplines" (Shanahan & Shanahan, 2012, p. 8). Amongst educators there is a growing realisation that to focus on narrow definitions of literacy is detrimental to student learning (Wendt, 2013), and classroom pedagogy must reflect broader definitions of literacy that take account of the increasing specialisation and complexity of high school subject areas.

A review of the literature concerning high schools and disciplinary literacy has highlighted there has been a shift in the use of terminology from *content area literacy* to *disciplinary literacy*. At times, researchers use these terms interchangeably, although there are subtle differences in the connotations of the words "content area" and "disciplinary". The use of the term *content area* seems to have evolved from use of *content area strategies* to describe the generic strategies applied to the reading and writing of texts across the curriculum. As literacy has evolved beyond reading and writing (Wyatt-Smith & Cumming, 2003, 1999), the term *disciplinary literacy* signifies a shift from content area strategies to broader understandings of the thinking, reading and writing specific to subject areas. While the terms *content area literacy* and *disciplinary literacy* might be used interchangeably, *disciplinary literacy* has connotations of broader fields of knowledge beyond school subject areas. When considering disciplinary literacy, a number of advocates refer to enculturating students into the broader habits of mind, knowledge and skills exhibited by discipline experts such as historians or scientists

(Moje, 2008, 2007). As noted by Cambourne (2013), the "scholarly disciplines" such as Maths, Science and English, taught in schools and universities, have not always existed (p. 10). Rather, they are "human created domains of inquiry, each with specific methods for constructing knowledge and promoting disciplines theories about the big questions of life" (Cambourne, 2013, p. 10). Therefore, for the purposes of this study, it can be considered that the literacy practices of specific subjects or content areas in schools have been derived from broader disciplines of knowledge that exist both inside and outside school. While a disciplinary literacy approach may require teachers to apprentice students into specific domains of knowledge, the intention is not to produce disciplinary experts, "but to produce students capable of critical thinking about the issues important to them" (Gillis, 2014, p. 621). Thus, within content areas, teachers apply discipline appropriate literacy practices (Gillis, 2014) that not only provide opportunities for students to learn the established knowledge of a specific field, but also to "question, critique and produce new knowledge within disciplines" (Moje, 2007, p. 34).

Within specific high school subjects or content areas, researchers have also focused on *content area literacies* or *curriculum literacies* to encompass a broad range of practices associated with specific subject areas. As definitions of literacy have broadened beyond reading and writing to encapsulate other modes, it is considered that a singular view of literacy is no longer appropriate to describe the habits of mind, knowledge and skills students are expected to develop within specific disciplines (Henderson, 2012; Wyatt-Smith & Cumming, 2003, 1999). While *content area* literacies seems to be a term utilised by American researchers (O'Brien & Bean, 2013; Fang, 2012b) to describe the diversity of practices students are required to undertake in specific subject areas, *curriculum literacies* is a term utilised by Australian researchers to describe those same practices. *Cross-curriculum literacy* is a singular term referring to "a generic skill with minor adaptations" in specific subject areas, whereas *curriculum literacies* are "dynamic, contextualised and complex", representing the diversity of ways in which students encounter and produce knowledge in specific subject areas (Wyatt-Smith & Cumming, 2003, p. 49). In this sense:

> 'curriculum' is used deliberately as a noun in order to demonstrate that this represents the interface between a specific curriculum and its literacies, rather than literacies related to curriculum in a generic sense. (Wyatt-Smith & Cumming, 2003, p. 50)

Teachers in all subjects must undertake a responsibility for providing students with opportunities to develop the literacies they require to succeed in specific subject areas because:

> Students must learn how texts function within a discipline and understand the inquiry frames and purposes that readers bring to texts and other artefacts of the discipline. (Goldman, 2012, p. 105)

However, to understand how texts function and how knowledge is produced in specific disciplines requires instruction from teachers who themselves may have had "little exposure to or experience with these literate practices" (Goldman, 2012, p. 106). Key to teachers' acceptance of their roles as teachers of disciplinary literacy and the literacies students require to succeed in specific curriculum areas is the understanding and acknowledgement of the "the key premise that the key disciplines are constituted by discourses" (Moje, 2010, p. 99).

2.2.4 Critical Language Awareness - Discourses

Disciplinary literacy represents a key shift from representations of subject areas as repositories of knowledge, to "spaces in which knowledge is produced or constituted" (Moje, 2010, p. 100). To be successful in subject area learning, students must "understand the norms and practices for producing and communicating knowledge in the disciplines" (Moje, 2010, p. 100). These norms and practices – or discourses – are the ways of knowing, thinking, being, doing and saying that are privileged within specific areas of learning. Understanding the discourses we engage in as social practices (Fairclough, 1992), particularly in terms of the ways in which we use language, is key to ensuring we are able to act as critical and literate citizens in an increasingly complex and globally-connected world (Fairclough, 1999). Advocates of disciplinary literacy follow a functional approach to using language which acknowledges that we use language in different contexts and for different purposes. Different subjects represent different contexts for learning and using language, therefore approaches to using language that take account of differences

between subjects are considered necessary if students are to be successful in their learning in high school. Content area approaches assume key skills are transferable from one sphere of life to another, and while such transfers might take place "it does not mean that we find the same discursive practice in all contexts" (Fairclough, 1999, p. 81). A focus on disciplinary literacy acknowledges that:

> With regard to language use, different purposes presuppose differences in how individuals in the disciplines structure their discourses, invent and appropriate vocabulary, and make grammatical choices. (Shanahan & Shanahan, 2012, p. 9)

Critical language awareness (CLA) of how subjects represent different discourses is not only important if students are to be successful in high school, but also necessary if they are to understand and engage in the discourses they will find themselves participating in the wider community, particularly in an increasingly-connected global community (Fairclough, 1999).

The challenge in developing students' knowledge of specific curriculum or disciplinary literacies is that the "the language through which academic subjects are presented is markedly different from the language that students use in everyday ordinary life" (Fang, Schleppegrell, & Cox, 2006, p. 247). What presents one of the greatest challenges for educators is that:

> Many of the students in our school rarely encounter 'academic language' outside of school, and students who have no opportunities to use academic language outside of school rarely just pick it up informally. (Schleppegrell, 2007, p. 126)

Disciplinary literacy, with an emphasis on explicit teaching of the specific ways in which subject areas construe language to make meaning, "is thus an act of social justice" as understanding how disciplinary communities produce knowledge enables learners to question that knowledge (Moje, 2010, p. 276). The ability to comprehend and compose a variety of texts in a variety of subjects "directly affects one's learning experiences, uses of school, access to education at higher levels, and a range of opportunities outside of school" (Fang, et al., 2006, p. 250). Thus, within specific subject disciplines, "language is the most important resource for meaning in the context of schooling" (Schleppegrell, 2007, p. 127). As students move through the

phases of schooling, and the literacy demands of each subject area become more challenging and complex, the language of distinctive subject discourses must be explicitly taught, as this language can be far removed from the everyday discourses students participate in outside of school.

2.2.5 Section Summary

In this section, empirical studies relating to high school literacy, and in particular, understandings of what constitutes disciplinary literacy, were reviewed. Consideration was also given to the place of literacy in the Australian curriculum, and the small body of research concerning how students manage acquisition of knowledge across a number of subject disciplines in high school. Exploration of studies relating to disciplinary learning and Critical Language Awareness drew attention to knowledge of language as critical to the development of specific curriculum knowledge and literacies. Studies relating to knowledge of language as a critical component of literacy development will be reviewed in the next section, with particular attention being given to writing in the secondary school.

2.3 Knowledge about Language

This section begins with a critique of literature relating to studies of writing in high school (2.3.1). The model of language underpinning the National Curriculum is then reviewed in Section 2.3.2, followed by an exploration of studies focused on knowledge of language – and in particular, knowledge of grammar – in high schools (2.3.3 - 2.3.5). Consideration of how students' writing development can be more effectively planned and the classroom interactions that can support their writing development will be presented in sections 2.3.6 and 2.3.7 respectively. A summary of the literature relating to knowledge about language will then be given (2.3.8).

2.3.1 Literacy and Writing

While the term literacy has "frequent mention in the press", it is often associated with reading rather than writing (Christie & Derewianka, 2008, p. 1):

> In a period of history when there is unprecedented attention to the importance of literacy, there is a surprising lack of research into the nature of writing development. (Christie & Derewianka, 2008, p. 1)

This emphasis on reading is evident in highstakes testing of skills conducted in many countries such as Australia, the United States and United Kingdom (Dreher, 2012), and in international comparative data provided by TIMSS (Trends in International Maths and Science Study) and PIRLS (Progress in International Reading Literacy Study), directed by the International Association for the Evaluation of Educational Achievement (IEA). Under the *No Child Left Behind* policy in America, nationally mandated testing of reading has resulted in the adage "what gets tested gets taught" (Tyre, 2012), resulting in an emphasis on reading at the expense of writing:

> *Literacy*, which once consisted of the ability to read for knowledge, writing coherently and expressing complex thought about the written word, has become synonymous with *reading*. Formal writing instruction has become even more of an afterthought. (Tyre, 2012, p. 2)

Australian teachers have experienced the "push-pull relationship between teaching to the test and responding to their own ethical beliefs of good practice" (Dreher, 2012, p. 347) in conducting the National Assessment Program – Literacy & Numeracy (NAPLAN), which tests Reading, Grammar and Punctuation, Spelling, Numeracy and Writing. Although writing is currently assessed under NAPLAN testing, "learning to write and learning to be a writer are relatively new areas of empirical enquiry" (Myhill, Jones, Lines, & Watson, 2012, p. 129). As students are expected to "compose sustained learning area texts for a wide range of purposes" (ACARA, 2014a) they need to possess knowledge about writing and language that allows them to not only comprehend a range of subject–specific texts with proficiency, but construct them as well.

2.3.2 Model of Language Underpinning the Australian Curriculum

The definition of literacy outlined in *The Australian Curriculum: English* is "informed by a social view of language that considers how language works to construct meaning in different social and cultural contexts" (ACARA, 2014a, p. 1). This social or functional view of language places "knowledge about language at the core of classroom practice" (Derewianka, 2012, p. 127) examining "how language use varies according to the context of the situation in which it is used" (ACARA, 2014c, p. 1). Although there is no clear agreement as to what "knowledge about language" (KAL) means (Locke, 2010) it can be viewed as a "curriculum notion"

which suggests "a wide-ranging awareness of language forms and varieties is useful in acquiring greater competence in language use" (Andrews, 2005, p. 72). Knowledge about language is encompassed within the ACARA Literacy Continuum (ACARA, 2014a, p. 13) through the two "overarching concepts" of *Comprehending texts* (listening, viewing, reading) and *Composing Texts* (writing, speaking, creating). Within the processes of *comprehending texts*, students are expected to develop *Text Knowledge; Grammar Knowledge; Word Knowledge*; and *Visual Knowledge*. The document does not clearly articulate the critical understanding that in all communication exchanges, these forms of knowledge are applied simultaneously to make meaning, a critical understanding that teachers require if they are to assist students in developing language awareness in specific subject domains. What the document does clearly articulate is that with the implementation of the Australian Curriculum, all subject area teachers – not just English teachers – are expected to teach students how to compose and comprehend texts, which includes knowledge about grammar.

Perhaps the most contentious aspect of *Knowledge about Language* under *Australian Curriculum* guidelines for secondary teachers is what grammar should be taught, and how it should be taught:

> While knowledge about language in a broad sense can be seen as having intrinsic value, questions are often raised more specifically about knowledge about grammar and its utilitarian merit. (Myhill, et al., 2012, p. 139)

However, there is also the question of who has the responsibility for teaching grammar:

> While the notion of knowledge about language covers more than grammar, it nonetheless has had a significant place in any discussions of English teaching. (Christie, 2010, p. 55)

This statement from Christie alludes to an important consideration in research: the teaching of grammar has traditionally been regarded as the domain of English teachers, with most studies to date focusing on grammar teaching in English. With all teachers charged "for the first time" (Jones & Chen, 2012, p. 148) with the responsibility of teaching Knowledge about Language – including grammar – there needs to be emphasis on what explicit or implicit knowledge about language is

needed within specific subjects or disciplines for the "intended curriculum and lifelong learning" (Locke, 2010, p. 5). It must also be noted that whilst it is not the first time, according to some state education policies, that teachers have a responsibility for teaching the language of their specific subject domains, the *Australian Curriculum: General Capabilities* statements represent the first nationally coordinated responsibility statements related to all teachers – across all phases of learning, and across all disciplines, in all states.

2.3.3 Explicit vs Implicit Knowledge of Grammar

The place of grammar in teaching and whether there are sustainable arguments for "a positive relationship between knowledge about language (however understood) and increased effectiveness of textual practice" (Locke, 2010, p. 5) continues to be a controversial issue in schools (Van Gelderen, 2010, p. 109). A review of research in this area highlights "methodologically rigorous and valid evidence concerning the impact of grammar teaching on writing is extremely limited" (Myhill, et al., 2012, p. 133). The Functional Model of Language underpinning the Australian Curriculum is derived from the work of Michael Halliday (Halliday & Hasan, 1985) and other Systemic Functional Linguists (Halliday & Matthiessen, 2004) whose concern has "always been with language as a semiotic or meaning-making system" (Christie, 2012, p.57). Under the Functional Model of Language, emphasis is on "form and function" in the teaching of grammar rather than a focus on "form" in traditional grammar (Derewianka, 2012, p. 142). Evidence shows that most studies of grammar and its impact on writing improvement have focused on the explicit teaching of traditional grammar which is largely "the rule of syntax" (Christie, 2010, p. 60):

> The traditional way in which grammar has often been taught is through exercise from a textbook or "ditto sheets" at the level of individual sentences and often using inauthentic language designed simply to teach a grammatical point. (Derewianka, 2012, p. 143)

Within the Australian curriculum framework and the model of language that informs it, grammar is to be taught within the context of each subject area. Despite the "considerable number of international studies purportedly investigating the impact of grammar teaching on writing, there is almost none in which grammar is taught in

context" (Myhill, et al., 2012, p. 141). Therefore, for secondary teachers charged with the responsibility of teaching the literacy demands of their subject areas, the question of how knowledge about language - including grammar - is to be taught within the context of specific disciplines and specific assessment tasks is problematic, as there has been little research evidence to guide their practice. There is also little evidence highlighting how students respond to the increasing literacy demands of their subject areas, and whether they transfer their learning from one discipline to another.

2.3.4 The Teaching of Grammar and its Impact on Writing: A Functional Approach

Research findings to date concerning the teaching of traditional grammar and its impact on writing have demonstrated that it has no positive impact on students' writing development (Andrews, Torgerson, Beverton, Freeman, Locke, Low, Robinson, & Zhu, 2006; Hillocks, 1987), although limitations of these studies have been acknowledged by other researchers. Hillocks (1987), reporting on his 1986 review of 2000 United States research papers, found "the study of traditional school grammar has no effect on raising the quality of student writing" (p. 74). Andrews (Andrews, et al., 2006) undertook a "systematic" review of research conducted between 1900 and 2004 in England to ascertain the impact of grammar teaching in English on the quality and accuracy of compositions by students aged between 5 -16. Andrews and his team found the teaching of syntax "appears to have no influence on either the accuracy or quality of written language development for 5 – 16 year olds" (Andrews, et al., 2006, p. 51). This was followed by another review in 2009 of research evidence concerning successful practices in teaching argumentative writing to 7 – 14-year-olds in England, under educational policy guidelines (Andrews, Torgerson, Low, & McGuinn, 2009). These studies were again confined to English classrooms, and the "research reinforces, in a limited way, some of the findings of the 2006 review" (Andrews, et al., 2009, p. 303), as the teaching of grammar was not the specific focus of the review. Previous studies and reviews represented grammar "in the narrow sense of knowledge about word and sentence structures" (Van Gelderen, 2010, p. 122). These studies did not engage with how grammar was taught,

nor had they considered the pedagogical strengths or confidence levels of the teachers involved, as well as contextual factors at each site (Myhill, et al., 2012).

With the adoption of a functional approach to language in the Australian curriculum, the question becomes whether the teaching of knowledge about language and grammar can have a positive impact on students' writing in all subjects, and how explicit the teaching needs to be. Myhill (2010) uses the term "tacit" to describe the rules and language knowledge that students develop unconsciously, and makes the point that there are various "gradations" between tacit and explicit knowledge (p. 140). She also poses an important consideration in the teaching of grammar, asking practitioners to consider what can be gained from making tacit knowledge explicit if "tacit knowledge acts as an influence upon the composition of successful writing" (2010, p. 139). Myhill acknowledges the argument concerning internalisation of language knowledge, and the belief that there is no need to make analysis specific if the writing is effective. However, she asserts there is a place for explicit teaching of grammar in providing students with a language or "metalanguage" to reflect upon their own learning:

> Explicit knowledge is, by definition, more cognitively accessible for reflection and decision-marking, and may therefore be a powerful enabling tool for writers tackling the cognitively complex task of writing. (Myhill, 2010, p. 141)

Considerations concerning future research in the area can draw upon the more recent study of Myhill (Myhill, et al., 2012) examining the contextual teaching of grammar and its impact on students' writing.

2.3.5 Teaching Grammar in Context

The significance of Myhill et al's (2012) study is that it "represents the first large-scale study in any country of the benefits or otherwise of teaching grammar within a purposeful context of writing" (2012, p. 161). There has been a dearth of prior research in this area, and what exists tends to be small-scale, focusing on a specific curriculum area, although results seem promising. One such study was conducted by Fearn and Farnan (2007), who explored whether teaching functional grammar could have a positive effect on students' writing, as well as satisfying

requirements of high-stakes testing. Their study was conducted in a large urban American high school in San Diego, where they delivered instruction in functional grammar – with a specific focus on verbs – to two tenth grade classes. These classes formed the "treatment" group (Fearn & Farnan, 2007, p. 68). One class, the control group, were given instruction in traditional grammar. Data collected during the study revealed "students in the treatment groups demonstrated enhanced writing performance, while students in treatment and control groups showed no difference in their understanding of grammatical elements in writing" (Fearn & Farnan, 2007, p. 72). Although this study was restricted to one site, and a relatively small group of students, like Myhill et al's research (2012), it raised the question as to whether the explicit teaching of aspects of functional grammar could assist in metacognition for reflection and decision-making, "where students' attention is focused on using grammar to think about writing" (Fearn & Farnan, 2007, p. 73).

Myhill et al (2012) contend their study was significant in "…combining complementary qualitative and quantitative measures" (2012, p.161), consisting of a randomised control trial (RCT), as well as text analysis, student and teacher interviews, and lesson observations. The study was a large-scale project involving 744 students in 31 schools in the south-west and Midlands of England. As part of the methodology, "blind randomisation" was used to allocate classes to an intervention or comparison group, based on teacher Linguistic Subject Knowledge (LSK). Intervention materials were constructed using the principles of "writing as design", including the pedagogical principle of "being explicit in highlighting grammar features where they related to writing being taught" (Myhill et al., 2012, p.154). The study found that "overall, the statistical analysis indicates a positive impact of the use of contextualised grammar teaching on student writing" (Myhill et al., p.153), with the greatest benefit experienced by more able writers. The research also found teacher Linguisitic Subject Knowledge (LSK) and length of teaching experience were "significant mediating factors" (Myhill et al., 2012, p. 152). Limitations of the study were noted, particularly in terms of the scale of the RCT design. The research team encouraged the design of further smaller-scale studies where teachers involved in the intervention design the materials themselves "thus taking ownership of the pedagogical principles which inform the study" (Myhill et al., 2012, p. 163). In the

research I conducted, I worked with teachers to design materials focused on language development in the subjects of English, History and Science. These materials were developed to reflect the learning context and specific units of work that had been pre-determined in national, state and school planning documents.

2.3.6 Appraisal and Students' Writing

Appraisal Theory, as an extension of Systemic Functional Linguistics, concerns the way that language is used to make evaluations of people and phenomena, and how the intensity of these evaluations can be sharpened or softened. Appraisal also describes resources writers and speakers utilise when engaging with and influencing audiences, through considering and discounting alternate viewpoints. As is the case with functional language theory, there is a need for research focusing on how student knowledge and understanding of Appraisal can assist in their comprehension and composition of texts, particularly in writing. What little research has been conducted highlights how successful student writers employ the resources of Appraisal. In a study of 669 Year 12 Queensland Writing Task scripts, a component of the Queensland Core Skills Test for those students seeking Tertiary Entrance, Dr Lenore Ferguson (1992) found that one of the components successful students demonstrated was exploitation of Appraisal resources. Successful students were able to intensify descriptions with great effect, and use language effectively to appeal to emotions and position readers. Other findings emphasised that successful students were able to match their language to suit the audience and purpose; were able to develop sophisticated and substantive linguistic complexity; selected topics dealing with abstraction and unusual perspectives; and demonstrated and authoritative stance in their writing (Ferguson, 1992). Not only does this study highlight that application of Appraisal Theory can extend the linguistic resources and capabilities of students, but that to be successful writers students need to be effective controllers and manipulators of language to suit a range of audiences and purposes. At my school, Year 8 students had already been introduced to Appraisal in English during their units of study in Terms One & Two. In Term One, they focused on how language was used to make evaluations of people and phenomena in novels, and during Term Two, they analysed how language was used in media texts to position readers/listeners to accept specific points of view. Appraisal was a feature of the

English unit in the study, and to a much lesser extent the History unit. Generally, in the junior years of secondary school science, use of Appraisal resources is not a strong feature of the texts studied in class (Christie & Derewianka, 2008).

2.3.7 Writing Development

Lack of a research tradition in writing, particularly in the secondary school context, has meant there is little evidence pertaining to how students develop writing skills and the practices that might assist in that process. While instructional texts might focus on particular writing skills, "rarely" is there evidence showing "what development in writing actually looks like" (Christie & Derewianka, 2008, p. 1). A functional approach to writing, that links form and meaning, has:

> The potential to illuminate developmental pathways, recognizing the ways complex language systems evolve and shedding light on questions such as what language features students are ready to take up and when, and the rate of development of different language features and systems. (Schleppegrell, 2007, p. 126)

Accordingly, Christie and Derewianka (2008) have constructed a "developmental trajectory" of writing based on an investigation of children's writing from early childhood to late adolescence across the curriculum domains of English, History and Science. In constructing their "developmental trajectory" of four stages, Christie and Derewianka (2008) have taken a Systemic Functional Linguistic (SFL) approach, (Halliday and Matthiessen, 2004), using notions of knowledge that are '*commmonsense*' – everyday knowledge, largely spoken language forms – and '*uncommonsense'* – dealing with more abstract, less "local" forms of knowledge (Bernstein, 1975) :

- Stage 1 – (*early childhood*) Simple 'commonsense' knowledge is expressed "in largely spoken language forms with simple attitudinal, evaluative expressions" (Freebody, Barton, & Chen, 2013, p. 311).
- Stage 2 – (*late childhood to adolescence*) 'Commonsense' knowledge is elaborated as "language resources expand grammar expands, and as grammatical metaphor emerges" (Freebody, Barton, & Chen, 2013, p. 311).

- Stage 3 – (*mid-adolescence*) "Knowledge becomes more 'uncommonsense' and is extended as grammatical resources are further amplified; attitudinal expression expands" (Christie & Derewianka, 2008, p. 218).
- Stage 4 (*late adolescence +)* " 'Uncommonsense' knowledge is expressed; is non-congruent grammar, expressing abstraction generalization, value judgement and opinion" (Christie & Derewianka, 2008, p. 218)

As Christie and Derewianka (2008) contend, it is "control over grammatical metaphor" that "is central to success in secondary school", where "unexpected grammatical forms" (p.25) emerge as students face the challenge of increasing complexity in the literacy demands of specific subjects:

> It is intimately involved in the building up of technicality – the specialized knowledge of the different disciplines. (Christie & Derewianka, p.25)

In their investigation, Christie and Derewianka (2008) also found that it is the juncture between Stages 2 & 3, where grammatical metaphor starts to emerge, that a number of students fail to make substantial progress. Teachers can use Christie's and Derewianka's (2008) descriptions of the linguistic features of each stage in the subjects of English, History and Science to more effectively plan lessons in writing to ensure students are not only completing assessment requirements, but progressing in their writing as well.

2.3.8 'Knowing' and Writing

While "formal, curriculum-specific writing" is "the core capability on which students are assessed" in the classroom (Freebody, 2013a, p. 6), there is "an anomalous invisibility of written work in daily teaching and learning" (Freebody, 2013a, p. 6). Much of the business of lessons is teacher and student talk, and it is analysis of the speech-exchange" systems that provides insight into "how teachers and students confront and manage changing curriculum-specific literacy practices in text and talk" (Freebody, Barton, & Chen, 2013, p. 307). In an Applied Ethnomethodological study of classroom interactions, Freebody (2013b) explored the "significance of a connection between teaching knowledge and learning writing in schools" (p. 6), noting that while much of classroom interactions are based on talk, students are assessed largely through formal, written assignments. This "crucial but largely unremarked misalignment – between teaching and learning via classroom

interaction and assessment via individual performance" (Freebody, 2013a, p.4) requires "retheorizing the curriculum-specific" (2013, p. 5) in secondary schools as students experience their "mass apprenticeship" (Freebody, 2013a, p. 5) into specific knowledge domains.

A significant aspect of students' apprenticeship into knowledge domains is how students learn about knowledge:

> What it is, what forms of it are valued, why these forms are valued and how they, as students, can engage and display these forms and thereby their understandings of these valuing processes (Freebody, 2013b, p 65).

Students learn this knowledge in classrooms, thus it is important to consider classroom structures and the kinds of practices students and teachers undertake "to build and maintain those structures" (Freebody, 2013b, p. 66). It is largely through language interactions between teachers and students that classrooms are simultaneously managed and instructed. These speech language exchanges largely build upon a question-answer-feedback sequence:

(1) Teacher's initiation (often a question)
(2) Students' responses – generally an answer of some sort
(3) Teacher's evaluation of that response (Freebody, 2013b)

In this three-part cycle, also known as IRE (Initiation, Response, Evaluation), teachers hold students to "account" for not necessarily providing the correct response, but a partial response that teachers can work with (Freebody, 2013b, p. 67). This IRE cycle is "an enduring and widespread feature " (Freebody, Barton, & Chen, 2013) of the "first curriculum" (Macbeth, 2011) , focusing on the methods participants – teachers and students – use to co-produce lessons. In much the same way as Christie and Derewianka's (2008) developmental writing trajectory demonstrates movement from everyday, 'commonsense' use of language to 'noncommonsense', the "first curriculum" is characterised by a "regular interplay" between 'vernacular' and more specialized/technical language that is subject-specific (Freebody, Barton & Chen, 2013c, p. 310). These exchanges have a "shadowy" (Freebody, 2013b, p. 68) relationship to the formal written assessment that students are required to produce, with an emphasis on content knowledge based on the assumptions that "coverage is more important than depth" and "that students must

first learn what to think and then how to think" (Cambourne, 2013, p. 11). According to Cambourne (2013), this has promoted a "pedagogy that places selecting, sequencing, and transmitting content at centre stage" (p. 11). It is incumbent upon practitioners, then, to consider how there can be pedagogical shifts to allow a greater alignment between the business of the classroom and written assessment.

2.3.9 Section Summary

In consideration of knowledge about language, empirical studies relating to student knowledge of grammar, as its application in writing, were reviewed. Studies relating to a Functional Model of Language and functional grammar were critiqued, particularly with respect to the model of language underpinning the Australian Curriculum: English (v.7.1). A need for further studies in the application of functional grammar across subject disciplines is clearly evident, as is the need for a greater range of empirical data relating to writing.

2.4 Chapter Summary

A critique of literature concerning student knowledge of curriculum literacies in high school, particularly in terms of writing, clearly identifies a lack of a strong research tradition in this area. There is little knowledge of how students might manage the shifts they have to make between different subjects and different academic discourses throughout a day. Compared to empirical evidence regarding reading in high schools, there is a comparatively small range of studies focused on writing. There have been a number of studies relating to the effect of traditional grammar on writing improvement, with data clearly showing it has little or no positive impact on student outcomes. However, there are very few studies exploring how application of the Functional Model of Language influences student knowledge of writing within specific subjects. As such, this study aims to fill a number of gaps in educational research, particularly at a time when national and state education authorities are charging teachers with the responsibility for improving literacy outcomes for students, but providing little guidance as to how it should be achieved.

Chapter 3: Conceptual Framework

Chapter 1 outlined the research problem concerning high school students' knowledge of curriculum literacies and its significance in the current educational context. It provided an explanation for my interest in the research problem, as well as changes in educational policies that have impacted on understandings of literacy and literacy practices in schools. Empirical literature concerning key aspects of the research problem were critiqued in Chapter 2, including disciplinary literacy and understandings about language, revealing a dearth of research concerning students' mastery of curriculum literacies in high schools, particularly in writing. The review of literature relating to the research problem also established that with literacy being privileged as a General Capability in the Australian Curriculum, there is a need for research in this area to provide guidance as to how improvements in literacy might be achieved.

This chapter provides the conceptual framework "as a starting point for reflection about the research and its context" (Smyth, 2004, p. 168). As a tool for scaffolding research, the conceptual framework will assist in making meaning of findings (Smyth, 2004). Ultimately, it will assist me to "develop awareness and understanding of the situation under scrutiny and communicate this" (Smyth 2000, p. 168).

The elements of the conceptual framework used in this study of Year 8 classrooms will be explained in this chapter. Section 3.1 will outline why language has been chosen as a framework for the study, followed by a description of the major elements of the Functional Model of Language (Halliday & Matthiessen, 2004) in Section 3.2. A significant aspect of this model – the language system of Appraisal – will be explained in Section 3.3. Also forming part of the conceptual framework will be an explanation of the *Developmental Trajectory in Writing* developed by Christie and Derewianka (2008), which is an extension of previous research in Systemic Functional Linguistics (3.4). Finally, a brief discussion of the curriculum documents used in the planning of units of work across three key learning areas is provided, to ascertain the topics of study, the assessment, and to a degree, specific learning experiences to be included in the study.

3.1 Why Language?

Language and ways of exploring language use provide the conceptual framework for this study. By language "we mean natural, human, verbal language – natural as opposed to designed semiotics" (Halliday & Matthiessen, 2004, p. 2) such as mathematics, music and computer language. For students across all phases of learning, "language is the most important resource for meaning in the context of schooling" (Schleppegrell, 2007, p. 127). In addition to this, "students also use language to display what they have learned in order for their progress and achievement at school to be assessed" (Humphrey, Droga, & Feez, 2012, p. 1). As students progress through school, they face increasing "curriculum, literacy and language demands" (Humphrey, Droga & Feez, 2012, p. 1), and their success is increasingly dependent on their ability to use language to compose and comprehend an increasingly sophisticated range of texts. Thus language can be viewed as "a system of resources used to make meanings in order to achieve social goals" (Humphrey, Droga & Feez, 2012, p. 2).

3.1.1 The Functional Model of Language

The Functional Model of Language underpinning this study – also referred to as the context/text model by Queensland English teachers in the 1990s – was developed by linguists "to explore what kind of knowledge about language would allow teachers to intervene more supportively in their students' literacy development" (Humphrey, Love, & Droga, 2011, p. 2). The Functional Model was derived from the work of Professor Michael Halliday (Halliday & Hasan, 1985). It allows users to "go beyond identifying discrete structural features" as occurs in traditional grammar to a model which allows them to "explore how language choices combine in texts" (Humphrey, et al., 2011, p. 4). If we acknowledge that "grammar is a way of describing how language works to make meaning" (Derewianka, 2011, p. 1), then a Functional Model of Language accounts for changes in language use according to different contexts or situations, and for different purposes. It is a model of language more reflective of how we develop and use language, not from rules and vocabulary lists, but "through expression…both spoken and written, in every area of life" (Collerson, 1994, p. 10). The Functional Model is essentially "about how language forms construe meanings of different kinds" (Schleppegrell, 2007, p. 122).

When adopted, the Functional Language Model helps us to understand and explain "the dynamic, evolving semiotic system" that forms the basis of all of our interactions (Halliday & Mathhiesen, 2004, p. 19). The Functional Model is a map providing an overview of language that will "enable us to locate exactly where we are at any point" along the way (Halliday & Matthiesen, 2004, p. 19):

> A characteristic of the approach we are adopting here is that it is comprehensive; it is concerned with language in its entirety, so that whatever is said about one aspect is to be understood always with reference to the total picture. (Halliday & Matthiesen, 2004, p. 19)

The Functional Model is appropriate for use in supporting students' language learning in secondary school classrooms because it considers how language is used for different purposes in different situations, and as such, helps to support students' acquisition of different curriculum literacies in different subject areas. The functional model of language is "extremely useful" in the secondary school context "for highlighting the challenges of language embedded in all academic texts and the specific challenges and expectations unique to particular disciplines" (Moje, 2007, p. 26).

3.1.2 Different Language Uses in Different Contexts

Even without explicit teaching, we learn about language through using it (Collerson, 1994). From an early age, we notice how our language interactions change in different situations, as well as differences between spoken and written language (Butt, Fahey, Feez, Spinks, & Yallop, 2000). By the time children reach adulthood, they develop subconscious knowledge of using appropriate language for different times and for different purposes (Butt, et al., 2000). The variety of ways in which language is used to create and express meaning are also influenced by "external factors" (Humphrey, et al., 2012, p. 6), that make up the context in which language is being used:

> Whenever we use language there is a context. The immediate context is the situation in which language is being used. But every situation is also part of a larger culture in which we live. This **context of culture** (author's emphasis) – the broad sphere of our operations – involves shared meanings and

> assumptions that allow us to take certain things for granted. (Collerson, 1994, p. 2)

Texts are always created in these two contexts: the context of culture, and the context of situation. A text can be defined as "a piece of language that is in use; that is, language that is functional" (Butt, et al., 2000, p. 3). As the research project is focused on different academic disciplines, the Functional Language Model can account for the different subjects or contexts in which students use language to make meaning, as well as the different ways in which those disciplines use language for a variety of purposes.

3.1.3 Cultural Context – Genre

The cultural context of the functional model of language relates to the broad cultural practices and institutional practices that shape our language use, particularly the social purposes for which we use language. These social purposes are realised in the genres or text types (Derewianka, 2011) that are privileged within specific groups and institutions within a culture, as is demonstrated in Figure 3.1. Genres, or texts that are constructed to achieve the same or similar purposes, "tend to be structured in the same ways, and use comparable language features"(Humphrey, et al., 2012, p. 7). This leads to predictability as genres "have evolved in particular ways to achieve their purpose" (Derewianka, 2012, p. 131) and a certain degree of predictability is required for discourse communities to operate. The functional model, then, accounts for the different genres privileged in school disciplines. For example, narrative is genre that is not only privileged in the English curriculum, but it is also considered to be a distinctive curriculum literacy the students must master in that subject domain. Narratives are generally not used by experts and students in the Science domain to achieve meaning, whereas Extended Experimental Investigations are. For educationalists, "understanding the patterns of language characteristics of different school subjects and genres can enable teachers to better scaffold the development of language and knowledge" (Fang, Schleppegrell & Cox, 2006, p. 249). A Functional Model of Language can assist in answering the research problem, as it will allow the research team to draw upon student knowledge of specific genres in separate subject areas, and how that knowledge is developed through language.

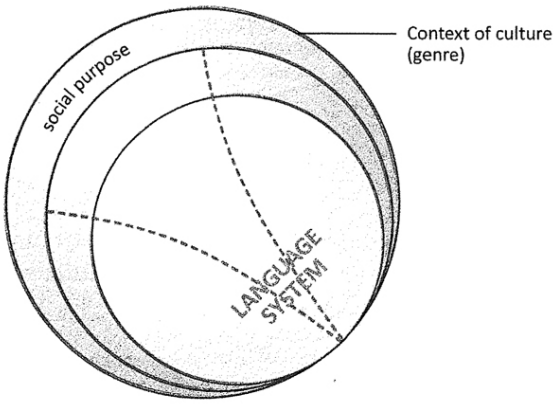

Figure 3.1 *Context of culture (Derewianka, 2012, p. 131)*

3.1.4 Context of Situation

When people use language at particular times in specific places, the Functional Model of Language "indicates how choices from the language system are influenced by certain features of the situation" (Derewianka, 2012, p. 132). There are three main features or "parameters" (Butt, et al, 2000, p. 4) of specific contexts: field, tenor and mode (Figure 3.2). These three features determine how we draw on "a network of grammatical and lexical (word) choices which can be seen as a tool kit with which we can make particular meanings in particular contexts" (Humphrey, et al., 2011, p. 6).

The **field**, also referred to as subject matter in curriculum documents, concerns what is going on, who is involved, and the surrounding circumstances (Humphrey et al., 2011). Essentially, it is what is written or spoken about. This aspect of the model helps explain how students vary their language choices according to specific disciplines, and specific topics of study. For example, in our school a few years ago, the topic of water was the area of study during one term across the Year 8 core subjects of English, Maths, Geography and Science. The aim of this cross-curriculum focus was to highlight to students how different subject areas organise, evaluate and produce information in different ways. For example, in Science, words like *solubility* and *diffusion* were used as students conducted experiments with water and other liquids. In Geography, students studied local water catchments and words such as *topography, salinity* and *contamination* were emphasised. Media representations of water were the focus of study in English, as at

that time, water restrictions were in place in the area. Students were required to write persuasive texts about water restrictions, thus they were concerned with words such as *deplorable* and *terrible wastage* in making judgments about water usage. In Maths students focused on *data sets*, *mean*, *median* and *mode* as they collated statistics about water usage. This highlights how even if subject areas study the same topic, they do so in different ways to reflect the knowledge privileged within specific disciplines.

Another feature of language usage in specific contexts is **tenor,** which focuses on the roles and relationships between language users, and the feelings involved in interacting with each other (Collerson, 1994):

> This reflects the notion of 'audience" that is commonly referred to in English teaching. (Derewianka, 2012, p. 132)

In consideration of audiences, tenor indicates how factors such as the status of language users, their gender, level of expertise and experience, ethnic and racial backgrounds impacts on language usage (Derewianka, 2012). How often language users meet, and how well they know each other also is a determination in how we use language in specific situations (Derewianka, 2012). Tenor is an important consideration in this project, as in their assessment tasks students are writing for specific audiences – often unknown audiences – which determines whether their language is more everyday and informal, or more technical and formal.

The **mode** of a specific context refers to different channels of communication that are used, whether they be written, spoken, or multimodal (Humphrey, et al., 2011). A key feature of the functional model of language is that it emphasises differences between spoken and written modes, whereas traditional grammar is concerned with mainly the written mode (Derewianka, 2012). In the research study, the written mode will be the main focus as it is the mode most commonly assessed in high schools. However, students are often unable to effectively transition into the more specialised and complex ways of thinking, writing and speaking required across high school disciplines because they have difficulty changing their language from spoken-like to more written-like forms (Derewianka 2011; Christie & Derewianka, 2008; Schleppegrell, 2007).

The three factors of field, tenor and mode "combine to shape the register of a spoken or written text in its specific context" (Humphrey et al, 2011, 6), evident in Fig. 3.2. The register refers to:

> The combinations of grammatical resources which create the field (the what); the tenor (the who); and the mode (the how) of a text as it achieves its particular purpose or genre. (Humphrey et al., 2011, p. 6)

Only one of these three register variables needs to be different "to create a substantially different text" (Butt et al., 2000, p. 5). For example, there would be different grammatical and lexical choices at play if students were required to create a persuasive multimodal text to be uploaded to a Youtube youth channel, as opposed to a letter-to-the-editor for a newspaper. Register, then, is an important consideration in this research project, particularly when students are producing texts for assessment, as it highlights that without control and understanding of register variables, students will be less successful in their learning.

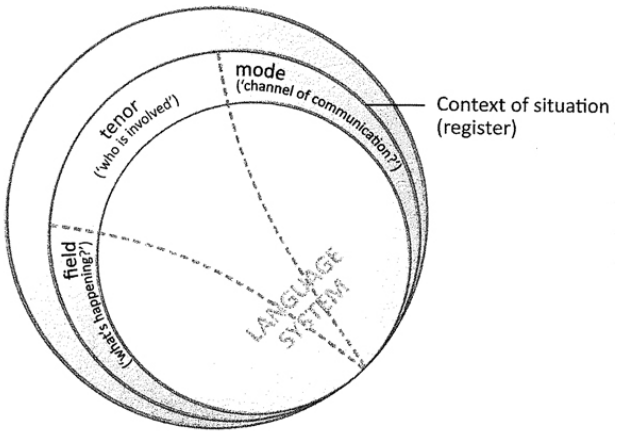

Figure 3.2 *Context of situation (Derewianka, 2012, p.132).*

3.1.5 Functions of Language

The Functional Model of Language considers how whenever people use language, "there is always something else going on" (Halliday & Matthiessen, 2004, p. 20). The three features of context of situation "affect our language choices precisely because they reflect the three main functions of language" (Butt et al., 2000, p. 5). Language "seems to have evolved for three main purposes" (Butt et al., 2000, 5). These three purposes, identified by Halliday & Matthiessen (1994), include the interpersonal; ideational or experiential (the term 'experiential' will be used in this

study as this is the most commonly used term in curriculum documents and texts); and the textual. Each of these will be explained in turn, and are evident in Figure 3.3.

The experiential feature of functional theory "proposes that language is used to present our experiences of the world (Derewianka, 2012, p. 34): what is happening, who's involved, and the processes people engage in:

> These processes involve a variety of participants: doers and receivers of the actions, thinkers, sensers, sayers…and surrounding all this activity are various circumstances: when? where? how? why? with whom? about what? (Derewianka, 2012, p. 134)

The experiential function of language is related to field, in that it is concerned with how people reflect human experience (Butt, et al., 2000). Through "describing language in terms of experiential grammar" it is possible for teachers "to introduce students explicitly and systemically to the array of choices available for making meanings about human experiences" (Butt, et al., 2000, p. 77).

The interpersonal function of language is closely linked to tenor, in that it demonstrates "how language functions to establish and maintain relationships with others" (Derewianka, 2012, p. 135). Throughout their lives, people take on many different roles as they participate in different discourse communities, and in schools, students are expected to assume a variety of roles and interact with a variety of audiences when they complete assessment. Interactions are also determined by whether language is used to offer or exchange information, and give or demand goods and services (Butt et al., 2000). This is referred to as the 'Mood System'. Appraisal Theory, explained in Section 3.5, is also applicable to the interpersonal function as it is "concerned with the expression of attitudes: feelings and opinions regarding the quality of things and judgement of people's behaviour" (Derewianka, 2012, p. 135). Appraisal Theory is also concerned with taking a position and engagement of alternate views and voices, which also impacts on language interactions. A Functional Model of Language, with its emphasis on interactions in language use, can assist students in building and maintaining social relationships (Butt, et al., 2000):

> Conscious knowledge of interpersonal grammar of interactions makes it possible for students to explore interactions used in contexts of situation relevant to their learning needs and goals. (Butt, et al, 2000, 105)

Understanding of the Appraisal system of language can also assist students in the critical analyses of texts, drawing on its resources to consider ways in which speakers and writers position their audiences (Martin & White, 1985).

The third function of language, the textual function, "enables the construction of texts that are coherent and cohesive" (Derewianka, 2012, p. 136). We use language "to organise our experiential and interpersonal meanings into a linear and coherent whole" (Butt, et al., 2000, p. 134). This is achieved through what is referred to as the 'thematic' structure of texts (Derewianka, 2012, p. 136), where there are "grammatical resources to signpost the way through clauses, clause complexes and paragraphs from the beginning to the end of a text" (Butt, et al., 2000, p. 134). For example, the beginning of a sentence can signal how subject matter is being developed. Topic sentences function in paragraphs to alert the reader to the argument or point that will be developed. An introductory paragraph of a text can provide an indication of how a text will "unfold" (Derewianka, 2012, p. 136). The textual function of language is often referred to as the "enabling function" because it "enables experiential and interpersonal meanings to be organised so that they can be realised in whole texts and make sense to listeners and readers" (Butt, et al., 2000, p. 154). In this way, the textual function is linked to mode, as the channel of communication being used – spoken, written or multimodal – determines text structures and patterns. In schooling "being able to control the expression of mode through textual grammar is critical to the development of the higher level literacies students need if they are able to be successful in education and employment" (Butt et al, 2000, p. 156).

The close relationship between context and language functions is illustrated in Figure 3.3. These aspects operate simultaneously in all language exchanges.

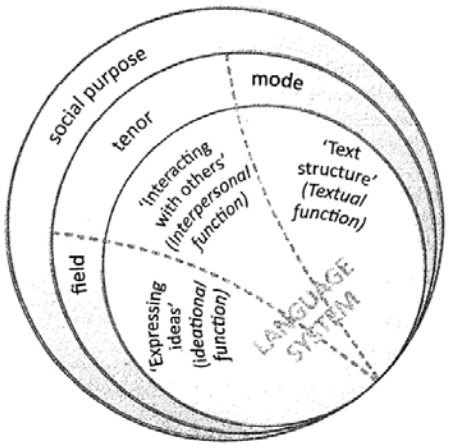

Figure 3.3: *Relating features of the context to the functions of language* (Derewianka, 2012, p.137).

3.1.6 Section Summary

In this study, it is the Functional Model of Language that will provide the main framework for the development of lessons in the subjects of English, History and Science for a Year 8 class. The Functional Model of Language will allow the teachers and me to consider the purposes and contexts in which language is to be used in each of these specific subjects, and develop appropriate learning activities to assist students in developing their understandings of specific curriculum literacies. During unit planning in each of the four subjects, consideration will be given to how the three functions of language – Experiential, Interpersonal, and Textual – are interacting simultaneously to influence students' language choices. One aspect of the interpersonal function – the resource of Appraisal – will now be discussed in further detail, as knowledge of Appraisal Theory can assist students greatly when comprehending how they have been positioned in texts, as well as using language to position a range of audiences in their own compositions.

3.2 Appraisal System: Resources for Evaluating and Engaging

The Appraisal Framework is an extension of Functional Language Theory (White, 1998). The Framework is:

> …an approach to exploring, describing and explaining ways language is used to evaluate, to adopt stances, to construct textual practices and to manage interpersonal positions and relationships. (White, 1998)

Appraisal Theory represents "a vast contribution to the way we understand texts" (Butt, et al., 2000, p. 121). As students progress through high school, they will be exposed to a range of increasingly complex texts, where text composers influence audiences to adopt a particular point of view with explicit and implicit interpersonal meanings (Butt et al., 2000). Knowledge of the Appraisal system enables students to develop awareness of how they are being positioned by patterns of interpersonal meaning, and whether they wish to align themselves with the writer's or speaker's position (Butt et al., 2000). This knowledge also allows students to adjust and manipulate interpersonal meanings in their own texts to more effectively position their own readers/listeners.

3.2.1 Appraisal: An Overview

The Appraisal Framework consists of three interacting domains: Attitude, Engagement and Graduation (Martin & White, 2005). Attitude "is concerned with our feelings, including emotional reactions, judgments or behaviour, and evaluation of things" (Martin & White, 2005, p. 35). Engagement focuses on acknowledging and exploring "voices" around a particular opinion, and whether these voices are affirmed or denied. Graduation represents "gradability", where "feelings are amplified and categories blurred" (Martin & White, 2005, p. 37). In the *Australian Curriculum: English* (2014), Attitude is implicit in references to "evaluative language"; Graduation is described as "grading"; and Engagement resources are referred to as "rhetorical devices" (Humphrey et al., 2011). These interpersonal language resources are evident in texts across all domains, and are important for students to deploy when comprehending and composing texts.

3.2.2 Attitude

Attitude is divided into "three regions of feelings" (Martin & White, 2005, p. 35): Affect, Judgment and Appreciation. Affect concerns "the resource for construing emotional responses" (Martin & White, 2005, p. 35), which are either explicit or implicit; positive or negative. Judgment deals with "assessing behaviour according to various normative principles" such as the personality or character of a person, as well as their ethics and morality. Judgment explains how language can be construed to provide positive and negative representations of people. The final

category of Attitude – Appreciation – concerns evaluation of natural phenomena, such as descriptions of people, as well as evaluations of artefacts such as books, paintings and films. Again, depending on language choices, the evaluations can also be positive, negative or neutral, as text composers seek to position the audience to align themselves with the views expressed in the text. Understanding the resources of Attitude assists students in defining their roles and relationships with specific audiences, and to use language effectively and appropriately to position the readers and listeners of their texts.

3.2.3 Graduation

Graduation is concerned with adjusting the degree of an evaluation to make it strong or weak (Martin & White, 2005). There are a variety of language tools that can be employed to add degrees of intensity to descriptions (force); or sharpen and soften (focus) meanings. An overview of Graduation is provided in Figure 3.4.

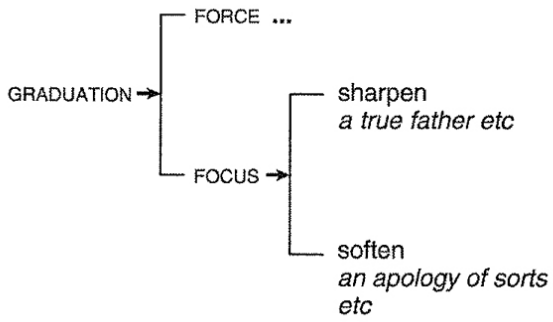

Figure 3.4: *The resource of Graduation (Martin & White, p. 138)*

3.2.4 Engagement

Referred to in the *Australian Curriculum: English* (2014) as "rhetorical devices", Engagement involves language users employing linguistic resources to adopt a stance (Martin & White, 2005). It considers how when taking a stance, writers/speakers reveal or "take up in some way" what has been said or written previously, as well as acknowledging anticipated responses (Martin & White, 2005, p. 92). Engagement reflects the assumption that all communication is 'dialogic'; that the influence of other texts and points of view is evident. Thus, Engagement takes interest in:

> the degree to which speakers/writers acknowledge these prior speakers and the ways in which they engage with them. (Martin & White, 2005, p. 93)

The Engagement framework is "directed towards providing a systematic account of how such positionings are achieved linguistically" (Martin & White, 2005, p. 93). It focuses on the degree to which writers and speakers open up or expand dialogue to consider alternate points of view, and how they contract to discount contradictory points of view (Martin & White, 2005). Thus in schooling, particularly as students progress into their senior studies where expositions of argument and discussion are important genres in all disciplines, knowledge of Engagement resources can assist students greatly in comprehending and composing texts.

3.2.5 Section Summary

Every time students read a text constructed by someone else, they are being positioned to accept specific representations and views of the world. Every time students construct their own texts, they are using language and text structures to position their readers and listeners to accept their own personal views and representations of the world. Knowledge of Appraisal theory allows students to undertake deeper-level analyses of texts to focus not just on how meaning is created, but how it is construed to produce an emotional reaction, judgement, or evaluation, with a specific degree of intensity. Understanding the language tools of Appraisal allows students to consider which views have been included, and those that have been excluded so that they become more discerning and critical readers/listeners of texts. When considering the applicability of Appraisal Theory to the three Year 8 subjects explored in the study – English, History and Science – attention will be given to the texts students are comprehending and composing in each of the three subjects.

3.3 Developmental Trajectory of Writing

The *Developmental Trajectory of Writing*, developed by Christie and Derewianka (2008), will provide a useful framework for planning writing in all subjects of the study. Figure 3.5 provides a broad picture of the phases, and outlines changes in knowledge as students move through different phases of learning. The framework draws upon Bernstein's (1975) notions of 'commonsense' and 'uncommonsense' knowledge, where 'commonsense' can be likened to everyday,

broader community language practices, and 'uncommonsense' moves to more specialised and particular areas of study. The framework explains how as students progress through different phases of learning, they are being exposed to increasingly specialised curriculum domains where understandings of the work are reflected in more abstract and 'uncommonsense' ways. Acquring this knowledge requires an increasing understanding and mastery of language to construe meaning in specific ways:

> Such a movement in knowledge parallels, and is made possible by, the movement in the grammar, from the congruent, to the increasingly non-congruent. (Christie & Derewianka, 2008, p. 218)

This essentially means that as they progress through school, students must acquire the knowledge that allows them to make the transition from more everyday, spoken-like forms of language use to more sophisticated, written-like constructions of language where more abstract fields are a feature of interactions.

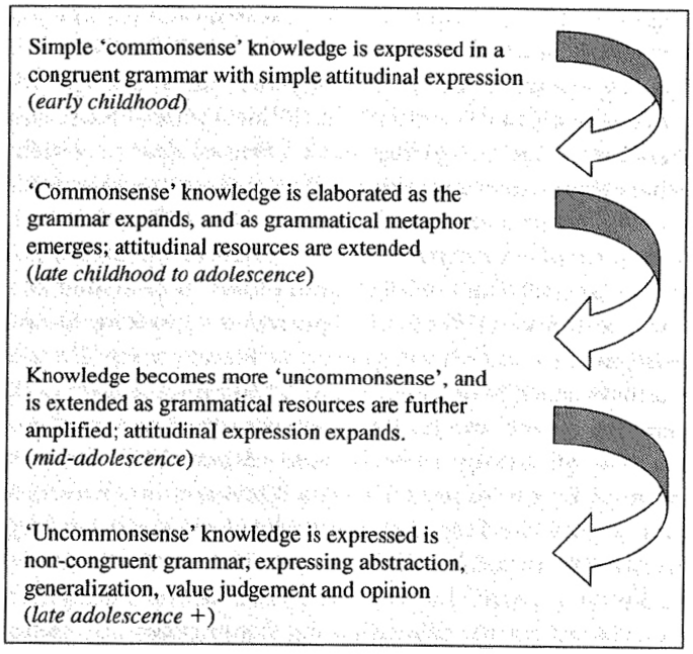

Figure 3.5 *Developmental phases in learning to write (Christie & Derewianka, 2008, p. 218)*

The *Developmental Trajectory of Writing* summarises many linguistic changes in the control of students' writing across all phases of learning within each of the three functions of language: experiential, interpersonal and textual (Table 3.1). The model illustrates how the second phase is critical in the study, because it

"straddles the transition from the primary to the secondary school when the curriculum changes, showing greater subject specialisation" (Christie & Derewianka, 2008, p. 240). Congruently, the phase also:

> marks an important transitional passage away from the forms of language like those of speech, towards forms closer to mature writing and grammatical organisation of children's texts which must change if children are to succeed. (Christie and Derwianka, 2008, p. 240)

It is in phase two that "many students begin to fall behind, a phenomenon recognized for some time" (Christie & Derewianka, 2008, p. 240). Thus this framework becomes a critical tool during the planning phase of the study, as it draws attention to specific aspects of each function of language that students have difficulty in mastering in order to successfully transition to phase three, which will give them a far greater platform for success in their high school studies. It should also be noted that some of the more successful students in the Year 8 class under study may already be demonstrating some of the descriptors of phase three, which will also need to be considered during the planning phase. Under the proposed methodology of Design Based Research, the phases of the *Developmental Trajectory of Writing* will be continually revisited throughout the study as the research group meets and discusses lesson progression and makes adjustments to learning activities, based on ongoing data collection. It should also be noted that the Developmental Trajectory included in this chapter can be applied to all subjects. As well, Christie and Derewianka (2008) have developed more specific trajectories for Science, English and History, which will be used where applicable during the study.

Table 3.1

Developmental Trajectory in Writing: A summary of the major linguistic changes in the control of written language in children's writing from early childhood into adolescence (adapted from Christie and Derewianka, 2008, 212-221)

Language Function	Early childhood 6-8 years	Late childhood-early adolescence: 9-12 years	Mid-adolescence: 13 – 15 years	Late adolescence: 16-18 years
Experiential	• Processes are realized in simple verbal groups. Participants are realized in simple nominal groups (may include embedded clauses). Circumstantial information is realized in prepositional phrases, primarily of time and place. • Sentences may consist of single clauses or combine clauses of equal status. The commonest unequal of dependent clauses present are of time. Occasional uses of dependent non-finite clauses of purpose	• Processes are more varied, expressed in expanding verbal group structures. Participants are realized in much expanded nominal groups, involving both pre-and post-modification of Headword. Circumstantial information is realized in a growing range of prepositional phrases and some adverbs. • Equal clauses remain, but an expanding range of dependent clauses appears – reason, purpose, condition, concession, manner. Non-finite instances appear a little more often. Also some clauses of projection. An overall growing capacity for grammatical intricacy in using and linking different clause types. • Grammatical metaphor emerges as nominalisation.	• The full range of Process types appears , and they are realized in a developing variety of lexical verbs, as lexis generally expands. Participants are realized in dense nominal groups involving increasing abstractions and/or technicality. Circumstances are often abstract, realizing a growing range of meanings. • Considerable range of clauses, singular, equal and unequal in different combinations. Some loss of otherwise independent clauses because grammatical metaphor compresses them. Clause types and interdependencies differ, depending on filed and genre. • Lexical and grammatical metaphors are more common. Grammatical metaphor is used purposefully.	• A full range of Process types is present, including often abstract material Processes, causative Processes and identifying Processes, Participants are realized in dense nominal groups, creating abstractions of many kinds. Circumstantial information is expressed in a full range of prepositional phrases, often contain extended nominal group structures, and in adverbs, which add variety. • A full range of clause types is available, and clauses are deployed in strategic ways, sometimes using singular clauses for their effect, and sometimes using several interdependent clauses, displaying grammatical intricacy. However, at this stage are often more lexically dense rather than grammatically intricate. • There are frequent uses of grammatical and lexical metaphor.
Interpersonal	• Tendency to use first person. Attitudinal expression (when present) mainly simple Affect, expressed in adjectives, occasionally with adverbs of intensity, and sometimes simple Processes of Affect. Limited awareness of audience.	• Tendency in greater use of third person. Occasional use modal verbs. Attitudinal expression in adverbs, as well as adjectives and a greater range of adverbs of intensity. Attitudinal expression is more evident than in earlier years, though not in science. In English and history, a more marked awareness of audience and some recognition of personal voice and engaging with others.	• A more regular use of their person, first person is retained for some fields and genres. Modal adverbs and verbs are used selectively, depending on filed and genre. An extensive range of lexis to express attitude is also available; also used selectively, as attitude has no great role in science. In history and English, a greater engagement with audience and some awareness of differing perspectives.	• There is a confident use of first or third person (depending on field and genre); a broad range of lexis is potentially available to express attitude. Modality is used judiciously, depending of field. Attitudinal and experiential values are often 'fused' in English and history. Science is attitudinally restrained. Dialogic engagement with a wider discourse community is evident, especially in English and history.
Textual	• Simple, repetitive topical Themes, which are often realized in first person pronoun. Sometimes uncertain use of Reference to build internal links.	• Developing use of Given and New Information to create topical Theme choices; marked Themes are expressed in Circumstances or dependent clauses some of which are enclosed dependent clauses. Better control of Reference.	• Good control of Given and New Information to create topical Theme choices, greater use of dependent clauses in marked Theme positions, some encloses; growing capacity to create macroThemes and hyperThemes to direct overall organisation of texts as they become longer.	• Good control of thematic development; frequent use of marked Theme choices to signal new phases in tests; good capacity in developing and sustaining overall textual organization, using macroThemes and hyperThemes.

3.4 Curriculum Planning Documents

Brief attention will now be given to the school and curriculum planning documents that set the parameters for the topics of study in each of the Year 8 classes and planned assessment, as illustrated in Table 3.2. In addition to the conceptual framework of the Functional Model of Language, Appraisal Theory, and the Developmental Trajectory of Writing, these documents provide further information about the context of the study, particularly the content for each of the units under examination. These curriculum documents include:

- ACARA (Australian Curriculum Assessment and Reporting) documents: It is Education Queensland policy that all Queensland schools have now adopted the Australian Curriculum in the following subject areas:
  - Australian Curriculum: History
  - Australian Curriculum: English
  - Australian Curriculum: Science
- C2C (Curriculum into the Classroom) materials – these are planning resources available to all Queensland state schools to assist them in implementing the Australian Curriculum in English, History, Mathematics and Science. The C2C documents present whole-year programs of learning and assessment in each of the areas of study: week-by-week, and in some cases, lesson-by lesson. The C2C units have been developed by Education Queensland staff for use only by Education Queensland schools. It is up to schools whether they follow or adapt the C2C resources. For the school under study, the C2C programs in History and Science have been adopted in Year 8.
- School-based planning documents: for the subjects that have not adopted C2C, they must develop their own school-based programs.
- The Australian Curriculum: Literacy: A General Capability – Literacy is a General Capability to be developed across all disciplines.

Subject	ACARA – Curriculum	C2C material	School-based units	ACARA - Literacy
English	x		x	x
History	x	x		x
Science	x	x		x

Table 3.2 *Curriculum Planning documents used in Year 8 subject areas.*

3.5 Chapter Summary

This chapter has outlined the conceptual framework that will guide the research project, particularly in the development of lessons to enhance student knowledge of curriculum literacies in the Year 8 subjects of English, History and Science. The Functional Model of Language, as well as Appraisal Theory, will be applied to the development of learning experiences for students in each of the core learning areas. The *Development Trajectory of Writing*, developed by Christie and Derewianka (2008), will also be used as part of the conceptual framework. It must also be acknowledged that curriculum planning documents – national, state and school-based documents – will set the parameters for the units of study and assessment in each of the four subject areas included in the study. The methodology selected on the basis of the conceptual framework will be explained in the following chapter: Chapter 4.

Chapter 4: Research Methodology

This chapter outlines the research design and data collection methods used to answer the research questions concerning students' knowledge of curriculum literacies in their first year of high school. In the first section, the choice of research method, Design Based Research (DBR), is outlined (4.1 & 4.1.1). This is followed by a brief description of the research site (4.2) as well as the participants (4.3). In Section 4.4, data collection methods are detailed, and Section 4.5 outlines the research phases. Approaches to the analysis of the data are considered in Section 4.6. The research procedure and timeline is provided in Section 4.7, and limitations and ethical considerations presented in Section 4.8. The chapter concludes with a Summary (4.9).

This project represented a collaborative approach between me – as researcher and Literacy Coach – and two teachers at a large regional high school in applying knowledge of language gained through literacy professional development. At the end of 2013, 65 per cent of staff at the school had undertaken training in either Education Queensland's *Literacy the Key to Learning* (Queensland Government, 2009) course, or *How Language Works* (South Australian Government, 2011), a course in classroom applications of functional grammar. Both programs support a disciplinary approach in the classroom, focusing on how knowledge is organised and represented within specific domains. While *How Language Works* is an in-depth exploration of the application of functional grammar within subjects, the *Literacy the Key to Learning* course not only focuses on application of functional grammar, but the use of written exemplars as well. Both teachers had been trained in the *Literacy the Key to Learning* course, with the Maths/Science teacher also completing *How Language works*.

The aim of the collaboration was to provide insights not only in terms of the learners and their knowledge of curriculum literacies, but the pedagogy that might support the development of those literacies, particularly in terms of writing - the mode in which most formal classroom assessment is conducted. In this way, we

were working together to act upon "knowledge in context, by and for the people who use it" (Forey et al. 2012, p. 71). I had approached the two teachers in 2012 to collaborate to produce lessons across four subjects – English, Mathematics, History and Science – to enhance students' writing capabilities. The lessons were to focus on the explicit teaching of writing through a functional language approach, to explore its applicability to a range of subjects across the curriculum. As will be explained later in the chapter, the plans had to be altered to conduct the research project later in the year - in Term 4 - which had implications for the project design as the Maths unit for that Term did not suit the application of functional grammar. Along with a Design-Based Research approach, we hoped to use data collected from classroom observations and students' work samples to guide our planning and classroom activities. As coach, I planned to support the teachers in their learning, developing learning activities with them, team-teaching where appropriate, and guiding them in their learning as much as the students. In this way teacher growth is facilitated, as they have opportunities "to engage as learners, build pedagogical knowledge and disciplinary knowledge, and co-construct and enact new visions of practice in context" (Nelson & Slavit, 2008, p. 100). This productive collaboration, then, is "an essential aspect of institutional and individual professional learning" (Burley & Pomphrey, 2011, p. 7) and formed the basis of our Design Based Research project.

4.1 Research Design

The methodology best suited to address these research problems was a qualitative approach, as the variables to be explored were unknown, largely due to a lack of research tradition in this area (Cresswell, 2012). A qualitative approach with an emphasis on the views of students also allowed me as researcher to interpret the central phenomenon – student knowledge of curriculum literacies in their first year of high school – in terms of the meanings that students brought to this concept (Denzin & Lincoln, 2000). In consideration of the proposed data collection methods – including interviews, observations and student work samples – a Design-Based Research approach was taken, as it supported either quantitative or qualitative data collection methods that were "useful" and appropriate to the intended intervention and goal (Morgan, 2013).

Design Based research was selected for this project as it is focused on "design and testing of a significant intervention" (Anderson and Shattuck, 2012, p.16) namely, using functional grammar to develop students' knowledge of language in the curriculum disciplines of English, History and Science. The research was situated in a "real education context" (Anderson & Shattuck, 2012, p. 16), giving the project validity and ensuring it "effectively bridges the chasm between research and practice in formal education (Anderson and Shattuck, 2012, p. 16). However, as I suggested above, the fact that the research was done in an evolving and at times unpredictable school context meant that I needed to negotiate and at times compromise on some of the original design elements. Rather than detracting from the study, however, these 'real-world' problems meant that I was able to gain insights that I had not anticipated at the outset, as I will discuss later.

4.1.1 Design Based Research

Design Based Research is a relatively new methodology which "seeks to increase the impact, transfer and translation of education research into improved practice" (Anderson and Shattuck, 2012, p. 16). DBR methodologies have both a "pragmatic bent" – where particular forms of learning and support of learning are "engineered" and studied in specific contexts – and a theoretical orientation – where the study of learning leads to the development of "relatively humble" domain-specific theories (Cobb, Confrey, Dilessa, Lehner, & Schauble, 2003, p. 9). In describing DBR the metaphor of a "learning ecology" can be employed "to emphasise that designed contexts are conceptualized as interacting systems rather than as either a collection of activities or a list of separate factors that influence learning" (Cobb, et al., 2003, p. 9). This learning ecology is viewed as a "complex, interacting system involving multiple elements" and the focus is on how those elements function together to support learning (Cobb et al., 2003, p. 9). Integral to the design of learning is the process of iteration, where reflection leads to a review of the design that has been implemented, as well as the means of supporting it. Through this process, the research team "deepens its understanding of the phenomenon under investigation" (Cobb et al., 2003, p. 12) while at the same time

constructs “design principles that can inform future decisions” (Paulus, Phipps, Harrison, & Varga, 2012, p. 68).

A Design-Based Research project can be evaluated against seven criteria (Reinking & Bradley, 2008). Below I summarise each of these and consider how these were applied in the context of this study

1. ***Intervention***: should be centred in “authentic instructional contexts” (Morgan, 2013, p. 6). The intervention may be a single activity or a set of activities “aimed at accomplishing well-defined goals” (Morgan, 2013, p. 6). In this project, a set of learning experiences in three subjects of English, History and Science was designed to support the goal of improving student learning as well as knowledge of specific curriculum literacies, particularly writing. Ultimately, the intervention consisted of lessons of explicit writing in the three subjects, although the length and timing of these lessons was constrained by curriculum and assessment demands that will be further explored in section 4.5. The intervention consisted of a series of lessons taught by the English teacher for the duration of the English unit; in Science, I taught two lessons with an explicit writing focus using an exemplar; and in History, I taught one lesson focused on writing after students handed in drafts of their assessment task. In History, feedback from the drafts was used to design the lesson of explicit teaching on writing. When we realised there was very little time in Science and History for the delivery and assessment of planned units of work, in collaboration with the teachers, it was decided that I would teach the lessons of writing in Science and History due to my experience and knowledge as literacy coach in the school. This alteration to the research design will also be further explained in Section 4.5.1.

2. ***Theoretical*** – DBR experiments are guided by theory about the process of learning and the means that are designed to support it (Cobb, et al., 2003) and may be localised to a specific learning context. This project was guided by theories concerning student learning in curriculum specific domains, particularly with respect to writing development, and how the development of activities based on Systemic Functional Linguistics (SFL) could support

learning (Fang & Wang, 2011). The research aimed to contribute understandings about the educational applications of systemic functional linguistics by providing insights into aspects of SFL that are important in the teaching of writing of specific genres for specific purposes in specific domains in high school settings. It also aimed to provide insight into whether a SFL approach across a number of subjects could impact positively on student writing, and thus aimed to theorise further about writing development of high school students.

3. ***Goal-oriented:*** A feature of DBR is to **"**investigate explicitly how to improve learning in real time and place settings" by identifying the improvement sought, why it is needed, and how it will inform the experiment design (Morgan, 2013, p. 7). The original goal of this intervention was to ascertain what knowledge students have of curriculum literacies in their first year of high school, and whether explicit teaching of writing in their core subjects could lead to improvement in students' learning outcomes. This goal is reported on in later chapters. In the context of a large high school implementing curriculum changes, the research highlighted that there are many internal and external factors impacting on the delivery of effective learning and assessment experiences for students.

4. ***Adaptive and iterative:*** Under DBR principles, there is possibility during the project to change the intervention and adapt the design as findings are gathered and analysed. As DBR is "intentionally iterative", to ensure design validity, it is important to record "where the project is modified or redesigned according to ongoing data collection" (Freebody, 2011, p. 12). As will become clear, it was necessary to adapt the original approach to the intervention given unavoidable changes at school that resulted in a time reduction for the curriculum delivery.

5. ***Transformative:*** Because of its intention to positively impact on teaching and learning, DBR has the potential to transform practice in learning environments of growing complexity (Paulus, et al., 2012). The iterative nature of its design allows the research team to respond to gaps, problems and

needs as they arise (Morgan, 2012). I was able to negotiate with my colleagues the most appropriate way to deliver the agreed interventions.

6. ***Methodologically inclusive and flexible –*** DBR projects support the adoption of any research methodology that is deemed appropriate for the intended intervention and research purpose (Morgan, 2013). In this project, qualitative methods of observations, student interviews and work samples were considered most appropriate for the planned research design, to emphasise students' views of their learning.

7. ***Pragmatic –*** DBR "was developed to make research more relevant to classroom practice by linking theory and practice, in a range of authentic settings" (Freebody, 2011, p. 12). Thus DBR, with its emphasis on "what actually happens or is done in the classroom", is more pragmatic in that "it seeks [to produce] knowledge that works" (Morgan, 2013, p. 9). This research project highlights the pressures and constraints schools are currently operating within, which must be acknowledged if further research in this area is to occur.

As a practising classroom teacher and curriculum leader, I selected this research design as the approach reflects a more "systematic, intense and data-driven" way of what I do in the school on an everyday basis (Reinking & Bradley, 2008, p. 3):

> setting pedagogical goals, making instructional moves to accomplish those goals, determining what works or doesn't work in helping or hindering the achievement of those goals, making appropriate adjustments, and assessing and reflecting on what has been accomplished. (Reinking & Bradley, 2008, p. 3)

Despite significant alterations to our original research design, the project provides insight into the challenges schools currently face as they apprentice students into key disciplines of learning, essential for lifelong and career success.

4.2 Context – Site Description

The research was conducted with the assistance of a Year 8 teaching pair, as part of a Year 8 Transition Program at a large regional Queensland high school with an enrolment of approximately 1200 students. This program is based on the belief that students' transition from primary to high school will be eased if they have fewer teachers and room changes. To achieve this, each Year 8 class is assigned a teaching pair – one teacher teaches English and Social Science; the other teacher teaches Mathematics and Science. These subjects are taught in a home room. One of the teaching pair is also the Pastoral Care teacher.

There were twelve Year 8 classes in the school at the time the research was conducted, with the number of students in each class deliberately capped at 25. This was a school administrative decision based on the belief that keeping class sizes smaller than the recommended departmental guidelines of 28 students per class in the middle school would be more conducive to establishing positive relationships in the Transition phase. The class that was the focus of the study initially had 24 students, consisting of 13 boys and 11 girls. By the time the project was undertaken in Term 4, there were 20 students in the class, with 9 girls and 11 boys. One student in the class identified as an Aboriginal student, and there was a teacher aide providing support to two students in the core subjects, although neither of the students had been ascertained under Special Needs guidelines. However, depending on the task being undertaken in class, the teacher aide worked with any students, when the need arose. One boy in the class was repeating Year 8 due to significant absences the previous year.

The teaching pair consisted of two female teachers. The Maths/Science teacher was in her sixth year of teaching, and had been involved in the Transition program for five years. The English/SOSE teacher was in her third year of teaching, and this was her second year of involvement in the Transition Program. Both teachers were specialists in the domains they were teaching, having undertaken studies in their designated curriculum areas during teacher training.

The timetable at the school is structured so that there are 4 x 70 minute lessons per day. Year 8 students had three lessons per week in English and

Mathematics, and 2 lessons each week in SOSE and Science. The term was 10 weeks long, with students generally being assessed by Week 7/8 in each of their subjects, depending on whether they were being assessed via exams or assignment work. These assessment dates were generally set to meet school reporting deadlines. While it was planned that Mathematics would be included in the study as a core subject, the Term 4 Maths task changed from an assignment to an exam response. Within the unit, there was little opportunity to introduce the explicit teaching of writing in Mathematics, as most of the unit focused on numerical equations. Thus it was decided to plan the intervention in three subjects – Science, History and English.

4.3 Participants

As researcher, and also a Head of Department and Literacy Coach, I worked with the teaching team to construct lessons designed to enhance students' knowledge of literacies in the curriculum domains of Science, English and History. Using a functional grammar approach, the emphasis was on writing, as it is generally writing that is assessed "via a solo literate performance" from individual students in high school (Freebody, 2013a, p.5). I approached the teachers as they were regarded as an effective teaching team, both committed professionals in their approaches to their work. Students in the class, with the support of their class teachers, were invited to take part in the research project.

4.3.1 Sampling - Staff

Selection of the teaching pair was also purposeful, based on:

- Previous professional development – the teachers had completed either *Education Queensland's Five-day Literacy Training* (Queensland Government); or *How Language Works* (South Australian Government, 2011), a 27-hour professional development program in classroom applications of functional grammar. This meant the selected teachers had knowledge of functional grammar that could be applied to the development of units of work focused on explicit teaching of specific curriculum literacies, with my assistance as Literacy Coach within the school. Despite only being in her sixth year of teaching, the Science/Maths teacher had undertaken significant professional development in

literacy. She had completed the Education Queensland *Literacy the Key to Learning five-day* professional development in 2011, as well as the *Language and Literacy: Classroom Applications of Functional Grammar* course, which entailed 9 x 3 hour modules. She had also trained as a facilitator in the First Steps *Tactical Teaching: Reading* course, conducting whole-staff professional development with me at the beginning of 2013.

The English/SOSE teacher completed a two-and-a-half day *Literacy the Key to Learning* professional development course at the beginning of term 2, 2012. This was an adaptation of the five-day Education Queensland professional development program, with an external consultant employed by the school to deliver the course.

- Teachers were also selected based on their receptivity to the project and willingness to work with me as a researcher. Collaboration amongst researches and practitioners is regarded as integral to the success of design-based research projects (Paulus, et al, 2012):

> For a design-based research project to succeed, it is essential that long-term working partnership relationships can be established with all participants, and especially with the teachers involved (Leeman & Wardekker, 2011, p. 330).

Both teachers expressed willingness to be involved in the project, particularly in terms of increasing their own knowledge and skills as well as the benefit students might gain from their involvement in the planned intervention. Both teachers expressed a desire to apply some of the knowledge they had gained through professional development to the learning of their students.

4.3.2 Sampling – Students

The process of assigning students to Year 8 classes can also be described as purposeful, although it is the Head of Department (HOD) for Middle Schooling who decides the final composition of classes. Student allocation to classes is based on a wide range of data, including enrolment forms, previous academic and behavioural records, and anecdotal information from feeder-school teachers.

The main criteria for assigning students to classes in the school are:

- *Special Needs students*: Firstly, the HOD Middle Schooling consults with the Head of the Special Education Unit to place Special Needs students in classes.
- *Mixed ability groupings*: School report data is reviewed to ensure there are a range of students exhibiting a range of ability levels in each class, from students regarded as having 'high' ability, to students regarded as struggling academically. In addition to academic ability, classes are also regarded as 'mixed' in terms of gender and behaviours, ensuring there is no specific ability group or gender dominating a class.
- *Friendship groups:* The HOD Middle Schooling ensures students have one or two of their nominated friends in their class, but no more than this, as the HOD has said past experience has shown it is not conducive to students developing relationships outside of their primary school social groups.

There are two large primary schools that are the main feeder schools for the high school, and these schools provided the largest number of students in the class (will be called 8X for the purposes of the study), with eight students from Feeder School A, and five students from Feeder school B. There were three students from another primary school in the city, with the remaining four students originating from a further four primary schools in the district. Therefore, the students in the class came from seven different primary schools in the district.

Despite extensive consideration given to the allocation of students into separate classes, the teaching team described 8X as "challenging" in terms of behaviour and personal issues, as well as learning difficulties. Even though none of the students had been ascertained, there were at least four students at the beginning of the year whose previous primary reports and Year 7 NAPLAN data revealed they struggled significantly in their learning. By the time the project was undertaken, two of the students had left the school, with one of those students signifying a refusal to attend any schooling. Teacher aide support was provided in the core subjects under the school's own allocation model espousing the belief that it is students in the

middle years requiring support rather than students in the senior years, where alternate pathways provide options for students.

All twenty students in the class were invited to participate in the study, with participation contingent on appropriate Education Queensland and parental consent being given. The project was designed for commencement in Term 3 2013, but one of the teachers involved in the project took on an acting role with higher duties for four weeks, thus the project was delayed until Term 4. All students were to be interviewed via group interviews at the start of the project, but as the study progressed, it was planned individual students would be approached to provide their insights into the teaching intervention, considering the impact on their own learning. Of the 20 students who were given consent forms, 11 students responded to a request to participate in the research project. Of those 11 students, eight consented to full participation in the project, including involvement in group and individual interviews, audiovisual recording of the interviews and observations, use of work samples, and use of recordings for professional development activities if appropriate. The project was amended to include all eight students in a group interview at the beginning of the project, followed by individual interviews with all eight students at the end of the project. These eight students, and their Term 4 results, are listed in Table 4.1. All students have been assigned a pseudonym.

Results are reported on a five-point scale, as follows:

A	Very High Achievement
B	High Achievement
C	Sound Achievement
D	Limited Achievement
E	Very Limited Achievement

Within each Achievement Level, students can be awarded + (plus) or – (minus), to signify they are operating above or below the middle of a particular Level of Achievement. Thus, a student would be awarded a B- to demonstrate they are mainly operating at a High Achievement level, but in certain criteria, they may be

displaying some characteristics of a Sound Achievement. Similarly, a B+ result highlights a students would be mainly operating at a High Achievement level, but would demonstrate some characteristics of a Very High Achievement level.

Student Name	Science Result Term 4	History Result Term 4	English Result Term 4
Bridget	**B+**	**B+**	**B+**
Connor	**C+**	**C**	**B-**
Isaac	**B-**	**B-**	**C**
Isabelle	**B+**	**B-**	**C**
James	**D+**	**C+**	**B-**
Lisa	**C**	**B-**	**A-**
Noah	**C**	**B-**	**C**
Simone	**C-**	**C**	**C-**

Table 4.1 *Students who consented to full participation*

The results for students who consented to their work samples being used, but declined to be involved in interviews and observations, are listed in table 4.2.

Student Name	Science Result Term 4	History Result Term 4	English Result Term 4
Liam	**B**	**B**	**B**
Mack	**A**	**B+**	**B+**
Tom	**C**	**C-**	**D**

Table 4.2: *Students who consented for work samples to be used*

4.4 Data Collection

Qualitative data collection techniques were selected as they were considered to be the most useful in the generation of an "abstract process" to answer the research objectives. (Cresswell, 2010). Data was collected throughout term 4, 2013, through observations, interviews, documents and audiovisual materials. These methods were selected as they are reflective of a Design-Based approach, allowing me to collect data from sources such as observations and documents, and adjust the planned intervention accordingly.

4.4.1 Lesson Observations and Field Notes

Observations were made using an Observation Protocol (Appendix 1 – Cresswell, 2010) during all phases of the unit: Orientating Phase – introductory activities designed to link to prior learning and establish the new topic of learning; Enhancing Phase – field knowledge is developed during this stage; and the Synthesizing Phase, where students are working independently to apply new learning. I observed one lesson during the Orientation Phase in History and English; two lessons in each of the subjects of Science, History and English during the Enhancing Phase; and two lessons of observation during the Synthesizing phase in each of the subjects. Lesson observations were conducted for full lessons, or parts of lessons, where a particular learning episode was of interest. The Enhancing Phase was of particular interest as it is during this phase that field knowledge of language specific to subject domains is usually developed. The Observation Protocol (Appendix 1) was designed to provide detail of the lesson under observation, as well as my reflections as researcher during the research process. There was also audiovisual recording of observation lessons to ensure details had not been missed, and to provide deeper understanding of the interactions being observed. The filming of these lessons was conducted in such a way that those students who did not provide audiovisual consent were not included in recordings. Details about observations will also be provided in the next section, where the phases of the project will be described.

4.4.2 Interviews

One group interview was conducted with the eight students who had provided full consent to the project, as well as individual interviews with each of the eight students. The aim of the interviews was to determine students' understandings of the curriculum literacies specific to particular subjects, and what assisted them in learning those literacies, particularly in writing their assessment responses. The emphasis was on student reflections of their own cognition, as there has been very little research focused on learners and their perceptions of the learning that has been planned for them (Moje, Dillon, & O'Brien, 2000). Initially, all eight students who had consented to full participation in the project were interviewed in a group for approximately 35 minutes. Interviews were semi-structured, to allow for participant viewpoints to be explored. Sample interview questions are provided in Appendix 2. After transcription and coding of interviews occurred, copies of interview transcripts were returned to students for member checking (Cresswell, 2010). Although this can be time-consuming, students need to see that they were important in the research process, and I needed to ensure that I was representing their views accurately without overlaying my biases on the data. Further description of interview processes will be provided Section 4.5, where the phases of the project will be outlined.

4.4.3 Documents

Documents collected included student samples of work and written reflective responses. Written samples were collected in each of the three subjects and included practice responses in English as well as students' assessment responses; students' assessment responses in Science; and students' draft and assessment responses in History. These documents were used to ascertain whether there had been a progression in students' knowledge of curriculum literacies, evident in their writing. Reflective responses were collected at the end of the teaching intervention, before students participated in individual interviews, to prompt them in their reflections concerning the knowledge they had developed of how each specific subject uses language to represent knowledge. Lesson materials – including unit plans, worksheets and assessment items – were also collected.

4.4.4 Audiovisual Materials (Recordings of Interviews and Classroom Observations)

Interviews and class observations were recorded to ensure important details were not missed when conducting interviews and observations. The camera used was a Bloggie, which is the model used by many faculties within the school. With this camera, data is easy to download, and the camera is unobtrusive in the classroom. Observations with audiovisual recordings were piloted initially, to see whether there was a need for another camera, to capture perhaps sections of the classroom the first camera missed, and to verify data. With the majority of students not consenting to filming, only one Bloggie was used to film observations. In the filming of those lessons, careful consideration was given to the positioning of students who had not given consent to be filmed nor to participation in the study. It was also explained to students that parts of the video recordings might be used for staff professional development, but only within the school context, not the wider educational community.

4.5 Research Phases

An outline of the research process, conducted during one school term, will now be given.

4.5.1 Phase One

- *Research Question 1*: What knowledge of curriculum literacies do students have in their first year of high school, and how does this knowledge develop?
- *Research Question 2*: How do students manage the "semiotic-shifting" from one subject to another?

The project was designed to begin in Term 3, 2013. However, as has been stated earlier in the chapter, the project was changed to Term 4 due to one of the teaching team acting for a period of time in higher duties, thus leaving the Year 8 class for a number of weeks in Term 3. At the beginning of Term 4, almost immediately, alterations had to be made to the research design to work within school and broader curriculum restraints. One of my aims in working with teachers was to work within parameters of unit outlines, to demonstrate to teachers time could be devoted to the

explicit teaching of writing within subjects, and that it could make a positive difference to students' assessment responses. However, I was not prepared for the considerable impact of time and curriculum demands in the subjects of Science and History that not only constrained teachers in the learning activities they constructed, but limited opportunities for students' to acquire knowledge of language and progress in their learning. As will be outlined in greater detail in the next chapter, units in Science and History at the school have been adapted from C2C (Curriculum into Classroom) materials. These materials have been written to reflect the Australian Curriculum v7.1 learning goals in the subjects of Mathematics, Science, History and English, and have been made available to Department of Education, Training and Employment staff for implementation since 2012. The greatest challenge seems to be that teachers view C2C materials as the Australian Curriculum, rather than an interpretation of the curriculum documents. When questioned by staff from other state schools about whether the English faculty at my school follows C2C, and I have answered "no", I sometimes receive the following response from teachers: "Oh, so you're not following the National Curriculum then?" The issue is not that the C2C materials, or learning activities are inappropriate or "bad" in themselves, but rather the density of materials and the emphasis on content knowledge evident in the units.

When these C2C units are adapted into a 10 x 70 minute lesson units, as was the case with Science and History, and teachers believe the content in the materials must be covered because it is the Australian Curriculum, time to teach writing can be hard to find. Thus, only one lesson in both History and Science was devoted to the teaching of writing, with a second lesson becoming available in Science when the teacher was absent and she suggested I take the class. As part of our collaboration, the decision was made that I would conduct the explicit teaching of writing in both Science and History, as there was only one lesson available for this in each subject. I relied largely on the teachers, as curriculum experts, to make judgments about the allocation of activities to each lesson. They were overwhelmed by the content and under considerable pressure to cover as much of it as possible, while also allowing students time for research in both subjects. We negotiated time for writing. In our original discussions we had planned for teaching episodes throughout the units,

where the teachers would be able to focus on one aspect of functional grammar at a time. With limited time, we made the decision that I would teach the lessons in Science and History, due to my more extensive knowledge and experience in teaching functional grammar. This would enable us to cover a couple of aspects of writing in one lesson, and the teachers would be able to observe how that could be approached. Whilst they were comfortable focusing on one writing feature at a time, they both expressed the view they did not feel they were knowledgeable enough to focus on a couple of aspects of writing concurrently. Even though both teachers had applied some basic elements of functional grammar in their classrooms, this had not been consistent, and it must be noted it had been some time since both had undertaken the professional development in literacy and functional grammar.

During the early observations, I assumed the role of non-participant observer, gradually becoming a participant-observer as the study progressed. This allowed students time to adjust to having an observer in the room. Observations were recorded on specially-designed observation protocols (Appendix 1), and audiovisual recordings of observations were made to assist with transcription. On certain days, I remained with the class for a couple of lessons, particularly during the morning sessions when two consecutive lessons were timetabled. This allowed me to experience the timetable from the point of view of students, particularly changing subjects and adjusting thinking to suit the context of the next subject. During the research process, I had to continually take the opportunity to be reflexive about my role as researcher, considering my dual roles as Head of Department in charge of English, as well as a Literacy Coach within the school. This meant that students had to be assured my role in the classroom was as a researcher, not an authority figure in the school who may or may not be passing judgment on their actions and oral responses. In my role as observer, I wanted students to be assured that they should tell me what they thought, rather than what they thought I might like to hear. I had to be mindful, then, of how I responded to students, being careful not to make statements that could be interpreted as judgments. I also wanted to ensure the teachers saw themselves as integral partners in the research process, rather than deferring to any perceived authority my school-based roles might encompass. I sought their knowledge about students and their learnings, and deferred to them as

experts in the disciplines they were teaching. When planning lessons in the explicit teaching of writing, and writing exemplars myself, I sought their advice and feedback, based on their subject knowledge and the extensive knowledge they held about students' prior learning and abilities. However, when it came to the explicit teaching of writing across the three subjects, while joint planning and teaching was desirable, with me assisting the teachers where appropriate, another adaptation was made to the project design. As already explained, it was decided that I would teach the writing lessons in Science and History, and that it would involve use of an exemplar, because of the limited time available. The English/History teacher taught the writing lessons in English, as planned. There were not the same pressures to cover content in English, and the teacher felt comfortable with the unit as she had taught it the previous year. She expressed confidence in conducting a process of modelled, guided and independent writing. The History unit on Shogunate Japan was a new unit, and the Social Science teachers at the school had used the C2C units for the first time that year. Therefore, the teacher had no prior experience of that unit or its delivery, thus her lack of confidence with task, which was also C2C-generated.

During Phase 1, a group interview was also conducted with the eight students who consented to full participation in the research project. To assist in this process, an open-ended questionnaire was given to students beforehand, with questions similar to those listed on the interview protocol (Appendix 3). The aim of the questionnaire was to encourage students to think about responses before going into the group interview and to counter a potential limitation that some students might be reluctant to speak in front of others. These written responses were also collected and analysed. A group interview structure, with an emphasis on the views of individual participants, was deemed more appropriate in this study as a data collection tool, rather than a focus group structure more interested in interactions between students' "emotional processes" (Gibbs, 1997). Interviews were also visually recorded and transcribed, and transcripts returned to students to validate the accuracy of the account.

This phase also involved the simultaneous process of collecting and analysing data, and conducting a preliminary exploratory analysis to gain a general sense of the

data and how to organise it (Cresswell, 2010). However, I was careful not to move too quickly to analyse and categorise the data, as this could have threatened the integrity of the study by ignoring findings revealed later. Crucial to the research design at this stage was the sharing of my observations and reflections with the teachers, particularly relating to the eight students who had consented to full participation. I wanted to ensure that collaboration was part of the research process to allow for appropriate adjustments to be made to the planned intervention. Students spoke about their perceived strengths and weaknesses as readers and writers within the disciplines, as well as some of the challenges they faced during the year. For example, a couple of the students expressed the view that they thought the production of a scroll in History was "a waste of time". I was able to share this with the History teacher, so she could perhaps focus more on the purpose and context of the task in a subsequent lesson.

4.5.2 Phase Two

- *Research Question 3:* Does the explicit teaching of specific curriculum literacies, particularly through a functional language approach in a number of subjects concurrently, have a positive impact on student learning?

Phase Two involved explicit teaching of curriculum literacies, particularly writing, across the subjects of History, Science and English. Explicit teaching of knowledge of language was to be a feature of the unit to answer Research Objective 2, using Christie and Derewianka's (2008) *Developmental Trajectory of Writing* as well as using the Functional Model of Language and Appraisal Theory to assist in planning teaching experiences. However, with the allocation of one lesson in History and two lessons in Science to the teaching of writing, adaptations had to be made to the planned intervention. It was decided that in both subjects, with the limited time available, I would write an exemplar for each subject, and focus mainly on the textual function of language relating to text organisation, particularly Theme at the whole text, paragraph and clause structure. Theme in functional language analysis relates to the messages readers are being oriented to through organisational features such as the thesis in introductory paragraphs, topic sentences in body paragraphs, and sentence beginnings. I also hoped to focus on how clauses could

be used to expand information, so that students could develop more complex clause structures in their own texts, a feature of academic writing. During each lesson, the importance of using the specialised language of each domain was also to be emphasised. From the group interview, students' responses demonstrated they had developed some understanding of the metalanguage in each subject, using the term comfortably in their oral responses, through explanations and examples.

In English, the textual function of language was also to be a feature of the planned writing intervention, as well as the use of evaluative language. The English unit was a school-designed unit, and was not constrained by C2C curriculum expectations. Also, the allocation of English lessons was 3 x 70 minutes lessons each week, one more lesson than both Science and History. The unit focused on Indigenous perspectives and was aimed at developing students' knowledge of evaluative language, using this knowledge to write a literary response about how they were positioned as readers to view the text. Two exemplars had already been developed for the unit: one written by teachers the previous year in response to a poem, and another written by a student in response to a picture book. It was planned that students would have numerous opportunities to develop their analytical and writing skills through repeated practices responding to a range of texts. This was to be enacted through a process of modelled, guiding and independent practice, with the English/SOSE teacher delivering the planned lessons in the teaching of evaluative language, and how to use written language to analyse texts.

A question that could be asked at this stage of the research project is why proceed if the design has to be drastically altered to the point where the planned intervention was limited in two of the subjects. What should be emphasised here is not that the intervention was limited, but that minimal exposure to explicit teaching of writing is the reality of students' apprenticeships in most academic disciplines in most high schools. The time and curriculum constraints we operated within during term 4 were the same constraints that impacted on teachers and students in Terms 1, 2 and 3. As such, the research project was not contrived and realistically reflects what is currently happening in schools. Even though there was limited time available for the explicit teaching or writing in Science and History, without this time

students would have significantly struggled to complete the complex texts they were expected to produce in both subjects. For example, without an exemplar that was written for the explicit writing lessons in Science, students would not have been able to perceive what the final product of a scientific report looked like. In History, students refined their topic sentences after the explicit teaching lesson, based on example paragraphs. In chapters 5 and 6, where the planned interventions and enacted curriculum in both subjects will be explored in greater depth, it will be evident that the demands of both tasks required attention be devoted to the structure and organisation of assessment responses, and there is evidence that some students benefitted from this instruction. These experiences provide encouragement that with greater opportunity for explicit teaching of writing in subjects, the benefits will be clearly evident in students' work.

Towards the end of this phase of the research project, the eight students who had consented to full participation were interviewed individually concerning their assessment responses in each of the three subjects, and the knowledge they had developed concerning writing in the key genres of the disciplines. Sample questions have been provided in Appendix 4. As is evident from Table 4.1, the students interviewed represented a range of mixed ability levels and gender. As with Design Based Research, the intervention only has the capacity to be adopted in other contexts if the project findings are reported honestly, taking account of positive as well as negative outcomes. Transcripts of interviews were returned to students for member checking, to further validate the accuracy of the data collected.

4.6 Data Analysis

This section will detail the data analysis methods that were applied through the study.

4.6.1 Constant Comparative Analysis

As the study progressed, Constant Comparative Analysis was used "to bring meaning, structure and order" to the data (Anfara, Brown, & Mangione, 2002, p. 32) . In this process, "data are compared and categories and their properties emerge or are integrated together", which aids in "identifying patterns, coding data, and categorizing findings" (Anfara, et al., 2002, p. 32). Analysis was inductive and

iterative, drawing together a range of data through a process of triangulation to make valid, credible and reliable evaluations that are the hallmark of interpretive research. The ongoing process of collaboration and reflection of all agents in the research project – researcher, teachers and students – helped to ensure the research goals remained a focus and "positively changes practice for the improvement of teaching and learning" (Morgan, 2012, p. 8).

Constant Comparative Analysis was necessary to ensure the research was reflective of Design Based principles, particularly the iterative nature of the approach. For example, while students in the group interview indicated they had no difficulty managing the semiotic shifting that has to occur when they change subjects, their struggles in meeting assessment demands, evident in the History drafts and practice English responses, highlighted that it was not easy to shift their thinking as they changed classes. This helped inform the planned intervention, particularly the lesson of explicit writing that occurred after the History drafts had been handed in. This adaptation and alteration of planned teaching episodes is what usually occurs in teaching and learning, and becomes an important component of the success of Design Based Research projects.

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4.6.2 Software Analysis

Despite the planned use of Leximancer software to scrutinise texts to identify concepts, their frequency, and inter-relationships, most of the analysis was completed manually due to the variation in students' responses. While the software package was a useful tool in encoding some of the data from student interviews and observations, finer vocabulary details needed to be reviewed manually, particularly in the linking of student responses to search for common themes. The informality of some of students' comments and incomplete statements also made it difficult to encode the oral responses using this software. Repeated review of students' responses made it easier to establish themes in their responses, which were also guided by the interview questions.

4.6.3 Textual Analysis

Systemic functional linguistics was applied in the analysis of the students' texts, particularly when comparing drafts and final copies in History, and practice responses and assessment responses in English. A common practice at the school is to produce exemplars for units of work, and analyse their salient features in terms of structure and language. The same process was applied to selected samples of student writing to ascertain the progression students had made in their writing after explicit teaching of language features. Combined with students' verbal responses through interviews, these texts provided some interesting insights concerning how explicit teaching of language features impacts on student writing and learning outcomes.

4.7 Research Procedure and Timeline

Data collection and analysis occurred during the following timeframe (Table 4.3)

	May/June 2013	July/Aug 2013	Sept/Oct 2013	Nov/Dec 2013	Jan/Feb 2014	March/April 2014
Ethical Clearance from EQ	x					
Pilot observations to refine data collection tools		x				
Meeting with teachers to discuss study and prepare learning activities			x			
Data collection			x	x		
Transcription				x	x	

Data analysis and preliminary findings				x	x	
Drafting					x	x

Table 4.3 Timeline for Data Collection, Analysis and Writing

4.8 Limitations and Ethical Considerations

In this section I will highlight some factors that may have the potential to impact on validity of the research study.

4.8.1 Potential Problems and Limitations

Student sampling has the potential to invoke limitations on the applicability of the research findings to other contexts. The assigning of 280 students to twelve Year 8 classes is a complex process, and it can be expected that there will be a range of ability levels evident among the students in the class. Students are assigned to the mixed ability groupings largely based on their school academic records which may or may not provide a full indication of a child's abilities. Also, Special Needs students are classified as those receiving support from the Special Education unit within the school, and do not include students presenting with other needs such as Culturally and Linguistically Diverse students and non-ascertained students. The research relies on the oral and written responses of the eight students who consented to full participation in the project. While Table 4.1 shows these students are representative of a range of ability levels and gender, this could be a constraint in that only a limited number of students agreed to participate.

Teacher sampling could also result in limitations concerning the applicability of the research to other contexts. The teachers involved in the study were selected based on their participation in specific professional development programs focusing on knowledge of functional grammar. Most staff completed these programs in 2009 and 2010, and classroom application of concepts has been variable. Both teachers involved in the study have and do apply aspects of functional language theory in the development of learning activities for students. While it is desirable for teachers to have some knowledge of SFL, it is not a prerequisite. During the process of

designing learning episodes with the teaching team, I had to maintain awareness of my role as Literacy Coach within the school, and as a Functional Grammar tutor, and respond to the constraints both teachers were operating within. Both teachers were given outlines and guidelines by their HODs in Science and History respectively, and it was my role to assist teachers to work within the parameters set by their curriculum leaders. While I may have felt tasks were too complex and that it would have been desirable to devote more time to writing, I had to ensure I did not undermine teachers and their leaders, but respect decisions that had been made with regards to assessment and learning. However, in my role as Literacy Coach, I do have a duty to share my findings with those staff and curriculum leaders so that learning activities and outcomes can be improved for students.

Another potential limitation on the study was the unpredictability of student responses during both the group and individual interviews. However, as the data revealed in subsequent chapters demonstrates, students were open, honest and insightful in their responses. I had to make sure I was careful when questioning students, ensuring that a prompt did not become a leading question. At times students found it difficult to articulate their thoughts, so I had to be patient in waiting for responses. Only one student, Lisa, proved to be a challenge during the individual interviews, as she rarely would elaborate upon a response when prompted for further detail. The questions given to students before the group interview encouraged active participation in responding to questions. However, I conducted the interview being mindful of all students, and not only allowing the voices of a few to be heard. When James and Simone demonstrated a reticence to speak in front of the group, I was mindful that students should be encouraged to speak, rather than pressured (Gibbs, 1997). While student responses provided rich data, as researcher, I ensured when prompting students, I did not lead them to provide answers that I might have been hoping to hear, recognising the research will only be reliable and credible if it accurately reflects students' voices. If the research is to truly provide insight into students' understanding of curriculum literacies, and thus inform pedagogical practice, then it must be a true reflection of their values and beliefs.

4.8.2 Validity Factors

While a number of ethical considerations have already been raised, key aspects of the study carry particular importance.

Confidentiality of participants was and continues to be respected at all times. It was important that participants felt they were fully informed and confidentiality strictly maintained. As already outlined, appropriate approval was given by the Department of Education, Training and Employment policies and guidelines. Letters explaining the project and consent forms were given to prospective participants and their families, who had the opportunity to clarify or raise issues through personal contact. It was explained to families that audiovisual materials might be used for staff professional development, but that this would only involve immediate school staff. For those families and students who did not give their consent, I had to ensure their privacy was protected during observations by not including them in filming, and that they were not included in interviews or analyses of student work.

4.8.3 Reliability and Credibility

Reliability and credibility of the research study was strengthened through constant comparison of data, interrelating points raised by students and cycling "back and forth between data collection and analysis" (Cresswell, 2012, p. 238). Triangulation enhanced the accuracy of data through "the process of corroborating evidence" from different data sources, including interviews, observations and student texts (Cresswell, 2012, p. 259). Ensuring accuracy in the use of specific data collection tools was also paramount, such as in interviews, where "the reliability of the interpretation of transcripts may be gravely weakened by a failure to transcribe apparently trivial, but often crucial, pauses and overlaps" (Silverman, 2001, p. 230). Member checking was also be used to validate accuracy of interview data.

Another consideration was "the equally important aspect of ethical research practices resides in the writing and report phase of the inquiry" (Cresswell, 2012, p. 279). As Anfara et al (2002) note, "there is one major element that is not sufficiently addressed – the public disclosure of processes" (p.29). They argue although many qualitative researchers outline their data collection methods, they don't provide enough description of the "inner workings" of how these tools were employed (p. 29).

Due to the iterative nature of Design-Based Research, it is particularly important to record and disseminate information regarding changes and adaptations made to the intervention and the analysis of data that supported these changes in subsequent chapters.

In the use of qualitative research methods it must be recognized that the researcher brings "values, experiences and priorities" (Cresswell, 2012, p. 430) to the research process. To ensure the meanings ascribed by the participants were given emphasis, I had to continually be reflective to ensure my attitudes and beliefs did not dominate. As researcher working with two teachers, I was cognisant of my role as Literacy Coach within the school, and the assumptions and expectations that may have brought to the study. It was imperative that I was reflective of my role at all times, ensuring that I did not overlay my beliefs about language learning at the expense of the teachers' knowledge of the students they teach.

4.9 Chapter Summary

This chapter has outlined the research project – where it was, who was involved, and how data was collected and analysed. Details of the research collaboration have been provided, being guided by the principles of Design Based research. Consideration has also been given to the potential problems and ethical quandaries that arose during the research process.

Chapter 5: Apprenticeships in Disciplines

I find managing subjects easy because it just seems to come naturally. (Bridget)

Maths (is the most challenging subject) because it is too complex for my little brain. (Simone)

A significant transition for students in their schooling lives is the move from primary to high school. Not only does that represent a physical shift for many students in moving schools, but it is also mentally and emotionally demanding as students encounter new teachers, new students and new operational systems such as timetables. High school also represents a continuation of the apprenticeships students have begun in primary school in developing their knowledge and understandings of subject-specific literacies. Whilst the majority of students say the move between subjects in high school is easy to manage, an exploration of the high school context, in terms of the learning and assessment demands of students in three subjects, highlights there are many challenges students must contend with to be successful in their learning.

The data and findings from the study are presented in the next three chapters. In this chapter, the context of learning in a large regional high school is considered as students undertake apprenticeships in specific domains of learning. Students' perspectives about their learning are presented through questionnaire and group interview responses, as well as students' own reading and writing profiles. The student data highlights how they perceive themselves as apprentices in a number of subjects simultaneously, particularly whether they encounter challenges in navigating the school timetable and changing subjects four times a day (Section 5.1). Further analysis of students' self-assessment through questionnaires and profiles in Section 5.1.2 will determine whether they approach all subjects with equal competency and enthusiasm, and provide insight into Research Questions 2: *How do student manage the 'semiotic-shifting' from one subject to another throughout a school day?*

This chapter will also review what was simultaneously planned for Year 8 learners in one term in the subjects of Science (5.2), History (5.3) and English (5.4), to ascertain the perceptions of Year 8 learners privileged in national, state and school curriculum documents. Analysis of unit outlines, assessment tasks and other resources provides further insight into curriculum and assessment demands

encountered by Year 8 students, as well as provides some information regarding Research Question 1: *What knowledge of curriculum literacies do students have in their first year of high school and how does that knowledge develop*? A review of curriculum documents leads to further understanding and appreciation of significant challenges students are confronted with in developing knowledge of literacies within specific disciplines. Review of the planned curriculum also highlights some factors that impacted on the research design and subsequent alterations that had to be made to planned classroom interventions.

Essentially, this chapter considers the learning context and the learning planned for students in the subjects of Science, History and English. Chapter 6 reviews the learning activities that were enacted in the classroom, and considers what and why alterations were made to the unit plans, particularly in consideration of explicit teaching of writing. In chapter 6, further data concerning Research Question 1 will be provided through students' interview and assessment responses: *What knowledge of curriculum literacies do students have in their first year of high school and how does that knowledge develop*? It also focuses on the explicit teaching of writing, and whether that knowledge benefits students in their learning, as outlined in research Question 3: *Does the explicit teaching of writing, particularly through a functional language approach, in a number of subjects concurrently have a positive impact on student learning?* In the final chapter, the major themes highlighted in the data will be summarised, and implications for future research considered.

5.1 Novices in the Disciplines

In their first year of high school, students are novices in the disciplines they are timetabled to study. Even though students may have received an introduction to the disciplines in their primary years, it is in high school, where subjects are clearly demarcated into separate domains that their apprenticeships begin in earnest. While we might assume that students are ready to embark upon their high school studies, "we may forget the nature of school requires that they learn and develop nuanced understandings of key features of disciplinary literacies for multiple domains at one time" (Billman and Pearson, 2013, p. 30). There is the expectation that as the year progresses, students will learn multiple ways of reading, writing and thinking in multiple disciplines. Students' abilities to manage the multiple shifts in learning modes within and across subjects is a "critical" factor affecting "students'

incremental learning as well as their successful completion of assigned tasks" (Wyatt-Smith & Cumming, 2003, p 51). As students progress in their apprenticeships in specific disciplines in Year 8, they demonstrate awareness of their abilities as readers and writers in the disciplines, which impacts on their willingness and abilities to participate in learning, and thus their achievements in specific subject areas (Buehl, 2011).

5.1.1 The Challenge in Changing Subjects

As part of their transition to high school, Year 8 students must not only physically shift between classes as the timetable demands, but they must also manage the shifts in thinking, reading and writing that occur when they change subjects. For students, the greatest challenge in changing subjects throughout the day - once they enter high school - is managing their equipment. They do not perceive any difficulty in changing from one subject to another with the semiotic shifts that occur as a result of those subject changes. In the group interview, students agreed having a timetable clearly demarcated into subjects and timeslots helped them by allowing them to prepare materials needed. This was summed up by Isaac:

> Um, well, it's not really that hard, there's only four subjects a day. It's pretty easy…um…to learn, like, get your correct equipment. Um, compared to primary school, it was a lot harder because usually the teacher would just tell you to grab this, grab that out of your tidy tray.

Isaac continued a few minutes later, saying that in primary "you did you have major subject changes, but you did not know what you were going to do, so it would often take…like a bit until you figured out what you were doing." Bridget said that "changing subjects four times a day kind of comes naturally. Um, you can adapt to the language." Connor and Noah both referred to the challenge of making sure they had the right equipment, giving the example of taking the wrong folder to Music, with the music room being on the opposite side of the school to their lockers. This seemed to be the students' main worry in changing classes: "annoying the teacher", as Connor said, by having incorrect equipment and missing out on class time to go and get the right equipment. Therefore, for students, the most difficult aspect of changing subjects is physical – moving between rooms and different parts of the school quickly, and making sure they have the correct equipment for individual subjects.

5.1.2 Students as Learners within Specific Disciplines

As learners, students have many subject positions and identities (Moje, Dillon and O'Brien, 2000) that "matter a great deal" in their abilities and willingness to meet the assessment and learning demands of specific content disciplines (Buehl, 2011, p. 7). Students enact many different identities in a variety of social and academic discourses. Students' identities as learners are shaped in part by how they perceive their capabilities in the subjects they undertake at school. The students in the study demonstrated a range of different profiles across subjects, which is largely shaped by the reading and writing students do within disciplines (Moje, Dillon & O'Brien, 2000, p. 7). At the end of the study, students were asked to complete a reading and writing profile, based on Buehl's (2011) Reading Profile (Appendix 3), which was adapted to create a profile for writing as well (Table 5.1). Students were asked to rate themselves by using descriptors ranging from *Can understand enough to pass* or *Can get by*, through to *Generally Competent* and *Highly Confident*. The aim of the profile was to ascertain how students viewed themselves as learners and their perceived strengths and weaknesses in specific disciplines. The profile was also used to determine whether students' profiles as readers mirrored their profiles as writers. Generally, there was a correlation between the strengths and weaknesses students identified as readers, and their nominated strengths and weaknesses as writers. The most articulate students during the group and individual interviews – Connor, Isaac and Isabelle – have identified as Highly Confident readers and writers across most disciplines. Simone and James, who both referred to their struggles in understanding class work and completing assessment, demonstrated the broadest profiles, highlighting their struggles in reading and writing in the core areas. The table also indicates assessment performance impacts on students' perception of themselves as learners. For example, even though Isaac and Isabelle identified as Highly Confident in Reading and Writing, they rated themselves lower in English, which is reflective of the disappointment both students felt in their Term 4 English result, expecting it to be higher.

Student	Eng	Maths	Science	History	Geog	H & PE	Art	Home Ec	Music	ITD	AGS	LOTE	Bus ST
Simone Reading	Can get by	Can get by	Sometimes struggles	Can get by	Sometimes struggles	Highly confident	Highly confident	Highly confident	Can get by	Can get by	Can get by	Only if I have to	Generally competent
Simone Writing	Generally competent	Generally competent	Generally competent	Can understand enough to pass	Can understand enough to pass	Highly confident	Highly confident	Highly confident	Generally competent	Generally competent	Generally competent	Sometimes struggles	Generally competent
Tom Reading	Can get by	Generally competent	Generally competent	Highly confident	Generally competent	Highly confident	Generally competent	Highly confident	Generally competent	Generally competent	Generally competent	Generally competent	Generally competent
Tom Writing	Generally competent	Generally competent	Generally competent	Generally competent	Generally competent	Highly confident	Generally competent	Generally competent	Highly confident	Highly confident	Generally competent	Can understand enough to pass	Generally competent
James Reading	Often struggle	Can get by	Often struggle	Often struggle	Sometimes struggle	Generally competent	Highly confident	Generally competent	Can get by	Generally competent	Often struggle	Often struggle	Generally competent
James Writing	Can understand enough to pass	Can understand enough to pass	Can understand enough to pass	Sometimes struggle	Sometimes struggle	Generally competent	Generally competent	Can understand enough to pass	Sometimes struggle	Highly confident	Can understand enough to pass	Often struggle	Highly confident
Isabelle Reading	Generally competent	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident
Isabelle Writing	Generally competent	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident
Noah Reading	Highly confident	Highly confident	Generally competent	Highly confident	Generally competent	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Generally competent	Generally competent
Noah Writing	Highly confident	Highly confident	Generally competent	Highly confident	Generally competent	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Generally competent	Generally competent
Connor Reading	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident
Connor Writing	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident
Bridget Reading	Highly confident	Highly confident	Generally competent	Generally competent	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Generally competent	Generally competent
Bridget Writing	Generally competent	Highly confident	Generally competent	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Highly confident	Generally competent	Generally competent
Isaac Reading	Generally competent	Highly confident	Generally competent	Highly confident	Highly confident	Generally competent	Highly confident	Highly confident	Generally competent	Highly confident	Generally competent	Generally competent	Highly confident
Isaac Writing	Can understand enough to pass	Highly confident	Generally competent	Generally competent	Generally competent	Highly confident	Generally competent	Generally competent	Generally competent	Highly confident	Generally competent	Generally competent	Highly confident

Table 5.1: *Students' profiles in reading and writing*

While Table 5.1 represents the reading and writing profiles of individual students within subjects, it also reflects the broader context of school and what some refer to as crowding of the curriculum". There are 13 subjects listed on the table, representing 13 subjects students are being apprenticed into during their first year of high school. Apprenticeships are unequal, however, with some subjects assuming greater time allocations and thus greater importance in high school timetables. In the school, the four core areas of English, Mathematics, SOSE (the school uses this abbreviation on timetable documents to represent Social Science subjects, namely History and Geography) and Science are given priority, being timetabled all year, with 3 English and Maths lessons per week, and 2 lessons for SOSE and Science. Because LOTE (Languages other than English) and PE (Physical Education) are mandated by federal and state authorities as well, these are also given priority in the timetable, with students being timetabled for one lesson of PE each week throughout the year, and two lessons of LOTE per week for one semester. The remainder of the subjects are rotated through three "trimesters" with each subject running a 13 – 14 week course before the timetable changes and a new elective is experienced. Timetabling requirements demonstrates how students' apprenticeships across subjects is unequal, so that by the end of Year 8, they have greater knowledge and understanding of some disciplines than others. This also highlights that every 13 – 14 weeks in Year 8, students have to alter and adjust their thinking to respond to learning in new subjects. In this instance, it is not unrealistic to contend that if students choose elective subjects in Year 9, their apprenticeships in those subjects really begins at this point.

What must also be considered is the significant assessment demands implied in a timetable of 13 subjects. If one assessment task is completed in each of the four core subjects per term, that is 16 tasks minimum that have to be completed during the year. If students have to complete one assessment task in PE per semester, that is another two assessment tasks that have to be completed for the year. In LOTE, students are generally assessed in three modes – reading, writing and speaking - which means at least 3 assessment tasks for the semester. If each elective subject is assessed once, that represents another five assessment tasks, this means students could be completing a minimum of 26 assessment tasks in their Year 8 year. Even though some of these assessments may involve practical skills, the majority of assessment in schools is formal, written assessment (Freebody, 2013b), and it

cannot be expected that students are adequately prepared for these assessment tasks when timetable constraints are significant. As has been highlighted in the previous chapter, as time is carved up in the timetable to encompass a broad range of subjects, then time is not adequate in any discipline to effectively apprentice students as learners in their domains. A summary of the intervention in the subjects of History and Science in Chapter 4 already demonstrates how students were not adequately prepared for assessment in these learning areas, due to time and curriculum restraints.

Another theme highlighted in Table 5.1, in conjunction with students' written responses concerning the subjects they liked and disliked in Table 5.2, is that students enjoy their elective subjects more than their core subjects. The subjects they have had the least exposure to in Year 8 are the subjects students want to experience more often. This is not surprising, as generally with elective subjects, teachers are very discerning in developing short units, emphasising practical elements they think students will enjoy over theoretical elements. In doing so, elective teachers are trying to encourage students to continue with the subject in Year 9, to ensure their place in the timetable remains. Physical Education was clearly the most enjoyable subject for students, seeming to provide respite from the rigours of core subjects that students are timetabled for all year, which they identified as the least enjoyable along with LOTE.

The year 8 timetable in most schools is busy and challenging for students. Assessment demands increase significantly from primary school, with a broader range of subjects and assessments being introduced across the year. Students' apprenticeships in the domains is variable, and in some cases in elective subjects, does not really begin until Year 9. This is the context for the research project, and represents the reality in a majority of schools. As is evident in recent submissions by Independent Schools Queensland (ISQ, March 2014) and the Australian Primary Principals' Association (APPA, 2014) to the Australian Curriculum Review, overcrowding of the curriculum is a major concern of teachers across primary and secondary sectors, as well as too much content that does not enable deep learning to occur. While this context restricted the intervention, it provides insights into the quality of the apprenticeships students are receiving in the disciplines deemed significant for their development as people and learners.

Student	Most enjoyable subject	Most challenging subject
Tom	Health and Physical Education	English because of the metalanguage
James	Business Education because you can design whatever you want. Really enjoyed subject where teacher allowed you to design whatever you want.	English – it's just a challenging subject because you have to use all this different types of language such as metalanguage, persuasive.
Simone	Health and Physical Education because you get to do stuff instead of sitting down for 70 minutes.	Mathematics because it is too complex for my little brain.
Isabelle	Health and Physical Education because there is minimal language and it is very hands on.	I find Science the most difficult because you have to learn difficult language to go with.
Noah	Health and Physical Education is the most enjoyable because it is the most fun and you get to do team building and be silly.	German: IT's a bit hard learning new words in a different language.
Bridget	The most enjoyable subjects were Agricultural Science and Chinese was enjoyable because it was challenging and I was good at it. Agricultural Science was enjoyable because I liked it.	The subject I found most challenging is Chinese because it was learning a different language.
Connor	The most enjoyable subject is Business Education.	The most challenging subject is Mathematics because it is a completely different formatting for writing.

Table 5.2: *Individual students' favourite and most challenging subjects*

5.1.3 Section Summary

Students see the greatest challenge in shifting between subjects in their first year of high school as managing the timetable and their possessions, ensuring they have the right equipment for the right class. Despite their assurances, there is significant semiotic shifting that has to occur across days, across terms, across trimesters, and across the 13 subjects students encounter in Year 8. Due to Federal and State government guidelines regarding time allocations for core disciplines, students have limited exposure to some subjects in Year 8, thus their apprenticeships in key disciplines is variable. By the end of Year 8, students have established distinct identities as learners within each of the disciplines they study. The reading and writing profiles of some students demonstrates they do struggle in making semiotic shifts between one subject and another. This is reflected in the Term 4 unit outlines for Science, History and English, which highlights students not only have to make significant shifts in the way they comprehend and respond to texts across subjects, but within subjects as well.

5.2 Term Outlines – Individual Subjects

Despite students' assurances that it is relatively easy to shift between subjects, an examination of the unit outlines and assessment tasks in English, History and Science reveals there are complex semiotic shifts students must contend with if they are to be successful in their learning in specific subjects. The unit outline for each subject will be explained in turn, including the assessment tasks and planned interventions as part of the Design Based Research activity. The unit outlines under examination represent the "official curriculum", the teaching and learning frameworks "that authorities at the system, and even the school, level believe are appropriate for students and that will be implemented" (Wyatt-Smith & Cumming, 2003, p. 50). These unit outlines provide evidence of crowding within subjects, where even a cursory glance of the description of each week or lesson reveals there is too much emphasis on content that can never hope to be covered within existing school timetables. In this way, the weekly and unit outlines also demonstrate why the research design had to be altered to reflect minimal time devoted to writing: the teaching of writing is absent from these documents. It cannot be trusted that writing will be taught as a matter of course when preparing students for assessment. It seems that with limited time, content is prioritised over writing, in the belief that content

knowledge is the main requirement that students must demonstrate in an assessment task. What is missing here is integral piece of the jigsaw puzzle: without knowledge of language and how language is used to represent information in specific genres within specific disciplines, students will have difficulty demonstrating their content knowledge and their learning progression will be limited.

5.2.1 Science – Unit Outline

In Science, the term topic was Cells, with the students required to complete a "*Factual scientific report written in passive voice/third person"* investigating plant and animal cells. The unit was adapted from a C2C (Curriculum to Classroom) unit, part of a series of units in the subjects of English, Maths, History and Science created by Education Queensland teachers in response to the Australian Curriculum for these subjects. These units are available through Education Queensland's computer management system called Oneschool, which all state schools have access to. While the units are not mandated for use, and may be "adopted or adapted", there is strong encouragement to utilise these resources, particularly in primary schools. The Science unit "Cells" included the C2C-suggested learning sequence for each lesson, as well as C2C-generated worksheets and resources. Students were timetabled for 2 x 70 minute Science lessons each week, scheduled as the last lesson on Wednesday, and the first lesson on Thursday. Drafts of the assessment task were due at the end of week 4, with final copies due at the end of week 6. Thus, students were allocated eight lessons before drafts were due. Classes had the opportunity to begin the unit in the last week of Term 3, giving them an extra two lessons of class time, including two lessons of research, before assessment was due. Therefore, the content of the first six lessons was spread across eight lessons, giving students two research lessons in week 4. The Australian Curriculum references, which can also be considered to be the key science literacies expected to be developed during the unit, are set out in the following table (Table 5.3):

Strand	Focus within strand	Description
Science understanding	***Biological Sciences***	• Cells are the basic units of living things and have specialised structures and functions
Science as a human endeavour	***Nature and development of science***	• Scientific knowledge changes as new evidence becomes available and some scientific discoveries have significantly changed people's understanding
Science inquiry skills	***Questioning and Predicting***	• Identify questions and problems that can be investigated scientifically
	Communicating	• Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate
	Processing and analysing data and information	• Construct and use representations, including models to represent and analyse relationships and information, including using digital technologies as appropriate • Summarise data from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions
	Evaluating	• Use scientific knowledge and findings from investigations to evaluate claims

Table 5.3: *Science – The Australian Curriculum organising elements for Term 4*

The detail of each lesson will be given, to highlight the knowledge and skills students were expected to develop during the unit (Table 5.4). A closer analysis of the content of each lesson reveals the challenging literacy demands students encountered during the unit, and highlights the significant pressure on teachers to cover specified content within a limited period of time. It can also be noted emphasis is given to what should be taught, rather than how it should be taught. The lesson content for Lesson 1 stated there should be a review of the C2C unit 7 for Year 7, and assumed

that students had been exposed to this unit. Although the participants in the study were drawn from two major state primary schools in the district that do base their Science curriculum on C2C units, it cannot be assumed that all students had been exposed to the same study, in the same depth, in their primary schools. This also highlights the importance of prior knowledge in the discipline of Science, and the presumption that once exposed to this knowledge, students only need to review it, rather than perhaps re-learn key aspects they may not have acquired during their first exposure to the topic. As students like Simone and James demonstrated, they do not acquire knowledge easily, and need continual reinforcement and "recapping" in class before they retain knowledge.

In their 8-10 lessons of study before assessment was due, students were expected to develop knowledge and skills in:

- Identifying parts of the microscope and using it to conduct scientific investigations
- Mounting and preparing slides
- Drawing and labelling diagrams based on slide specimens
- Explaining cell theory, including developing knowledge of scientific investigations conducted by key historical figures in the field of Science
- Evaluating the work of historical figures, proposing questions and problems considered by them
- Identifying the structure, composition and organelles of animal cells
- Identifying the structure, composition and organelles of plant cells
- Identifying and evaluating differences between plant and animal cells
- Developing knowledge and understanding of cell specialisation

Although the *Literacy General Capability* was referred to in each lesson outline, there was no suggestion that explicit teaching of the structure and language features of the task should occur. The reference to the Literacy Capability outlined in each lesson was as follows:

  - *Comprehending texts through listening, reading and viewing*
  - *Composing texts through speaking, writing and creating*
  - *Text knowledge*
  - *Grammar knowledge*

- *Word knowledge*
- *Visual knowledge*

In Week 4 Lesson 8, students were to be introduced to the task, ensuring they "…*understand what they are expected to do",* as well as highlighting "*the assessable elements of the task*" and discussing what "*each of the responses might look like at standards A-E".* No suggestions were made concerning the specific text knowledge, grammar knowledge, word knowledge and visual knowledge required for successful completion of the task. Exemplars were not provided as part of the resource package for students to be able to assess what standards A-E might look like. The suggested learning sequence for each lesson is set out in the following table (Table 5.4).

Week	Lesson Outline
Week 1	**<u>Lesson 1: Discovering the Cell – Observing Life through a microscope</u>** • Students will use microscopes to observe and recognise the cell as the basic unit of life • Cell theory is introduced and the scientific work and findings which proceeded its formation **Students will:** ***The microscopic world*** • Review microscopic organisms classified in Year 7 Unit 7 • Discuss methods to observe the microscopic world • Define a cell as basic unit of living things ***The microscope*** • Explain the purpose of microscopes • Identify the parts of a microscope • Use a microscope to observe prepared slides ***History of the microscope*** • Review how the development of the microscope changed classification systems (Year 7 Unit 7) • Outline the history of the microscope • Propose questions and problems considered by historical

	figures • Reflect on advancements in the structure of microscopes
	<u>Lesson 2: Discovering the Cell – Introducing the Cell Theory</u> **Students will:** ***Replicating historical observations*** • Replicate microscopic observations conducted by Anton van Leeuenhoek • Observe a demonstration of preparation of a we mount slide • Prepare wet mount slides • Construct scientific diagrams of observations • Reflect on the use of the microscope in scientific investigations ***The Cell*** • Compare multicellular organisms and unicellular organisms • Identify examples of multicellular organisms and unicellular organisms ***The Cell Theory*** • Outline original cell theory • Propose how all theory could be evaluated • Identify questions that could be investigated to validate the claims of cell theory • Know the conventions of drawing scientific specimen diagrams from microscopic investigations
Week 2	**<u>Lesson 3: Examining the building blocks of life – examining animal cells</u>** **Students will:** ***Hierarchical Structure of Organisms*** • Review the hierarchical structure of organisms • Highlight the position of cells in this structure ***Historical figures examining animal cells*** • Review the scientific work of Theodor Schwann • Construct questions based on his work that could be scientifically investigated

	• Describe how the work of Theodor Schwann provides evidence of the cell theory ***Animal cells*** • Use microscopes to examine prepared slides of animal tissue • Identify cells within the tissue samples • Review conventions of drawing cell diagrams • Draw scientific specimen diagrams of observed cells ***Structure of an animal cell*** • Construct a labelled diagram of a typical animal cell • Identify the key organelles cell membrane, mitochondria, cytoplasm, endoplasmic reticulum, nucleus, ribosome, vacuole, Golgi apparatus found in animal cells • Outline the key functions of identified organelles and cellular functions • Compare a typical animal cell diagram with a drawn specimen diagram • Label scientific specimen diagrams of observed animal cells
	<u>Lesson 4: Examining the building blocks of life – examining plant cells</u> **Students will:** ***Historical figures examining plant cells*** • Review the scientific work of Matthias Schleiden • Construct questions based on his work that could be scientifically investigated ***Observing plant cells*** • Review the basic structure of plants • Observe demonstration of preparation of a wet mount slide • Prepare wet mount slides of a range of plant tissues • Use microscopes to examine prepared slides • Identify cells within the tissue samples • Draw scientific diagrams of plant cells ***Structure of a plant cell***

	• Identify organelles found in plant cells • Construct a labelled diagram of a typical plant cell • Compare plant cell structure to animal cell structure, highlighting key differences in organelle and structural composition • Outline the key function of organelles (cell wall, chloropasts) and cellular structures (starch grains) that are unique to plant cells • Describe how the work of Matthias Schleiden provides evidence of the cell theory
Week 3	**<u>Lesson 5: Examining the building blocks of life – Analysing the structure and function of cells</u>** **Students will:** **Identifying organelles** • Revise key organelles found in plant and animal cells • Outline the role of organelles in the functioning of cells **Cell specialisation** • Define cell specialisation • List the advantages and disadvantages of cell specialisation to multicellular organisms ***Specialised plant cells*** • Revise differences in cellular structure of observed plant slides • List examples of specialised cells in plants • Identify the key structural features and organelle composition of identified specialised plant cells • Make links between the specialised cells' structure and function ***Assessment of the cell theory*** • Use historical studies and findings to evaluate the validity of the first and second cell theory tenets
	<u>Lesson 6: Examining the building blocks of life – outlining the</u>

	<u>formation of cells</u> **Students will:** ***Review the cell theory*** • Review the three original statements of the cell theory • Find what has been found so far in the analysis of the three statements **Historical figures examining cell formation** • Review the scientific work of Robert Remak and Victor Virchow • Review the experimental work of Louis Pasteur ***Reflect on the views of scientists*** • Revisit the historical idea of spontaneous generation of cells • Consider the alternative theories to spontaneous generation • Outline the problem that was solved through the work of Robert Remak and Pasteur ***Outline mitosis*** • Observe cell division using prepared slides or online resources • Define mitosis • Outline the sequence of mitosis and the cell cycle ***Reflect on cell theory*** • Outline evidence related to the validity of the original cell theory tenets • Propose changes to the tenets • Review the modern cell theory
Week 4	**<u>Lesson 7: Demonstrating unit concepts – reviewing, reinforcing and extending learning</u>** Students will: ***Review and reinforce learning on plant and animal cells*** • Review the structure of plant and animal cells • Revise examples of cell specialisation in plant and animal cells • Relate the function of specialised cells with their structure and composition

	• Consider the influence of cell specialisation on the structure and functioning of organisms ***Review and reinforce the development of cell theory*** • Revise the three tenets of the original cell theory • Review the scientific work conducted by key historical figures related to the tenets • Reinforce links between key scientific findings and the validity of the tenets • Identify problems and construct questions that could be investigated scientifically related to historical scientific work examining cells' structure and function ***Review completed worksheets*** • Review the completion and content example resource sheets to be used in the assessment task – *The Nature of Cells* • Review sheets: - *Observing plant cells* - *The cell theory*
	<u>Lesson 8: Demonstrating unit concepts – assessing unit concepts (Drafts due)</u> Students will: ***Introduce and review the assessment*** • Review the separate sections of the assessment • Ensure they understand what they are expected to do ***Review the Guide to making judgments and understand the standards A-E*** • Work through the *Guide to making judgments* and highlight the assessable elements • Discuss what each of the responses might look like at standards A-E • Clarify any components of the assessment ***Conduct and complete the assessment*** • Conduct Part A of the assessment • Complete Part A of the assessment

	• Conduct Part B of the assessment • Complete Part B of the assessment
Week 5	**Planned Intervention – Focus on Writing**
Week 6	**Final Copies due**

Table 5.4: *Term 4 unit outline – Science*

The information in the table has been derived from school curriculum documents. I added the Planned Intervention in Week 5, to demonstrate where it occurred during the teaching learning cycle. What the table reveals is a density of content and an overwhelming array of activities that could never hope to be completed within 10 lessons. It must also be remembered that this is not the entire C2C unit, but an adaptation of the unit to suit the school timetable.

If you scrutinise specific lesson outlines more closely, the emphasis on content is clearly evident, as is the expectation that the content will be covered in significant breadth. For example, with the first lesson, three areas of content are expected to be covered: The Microscopic World, including assumed Year 7 knowledge; The Microscope; and History of the Microscope. For the teacher, the challenge is to implement this intended curriculum within a 70 minute timeframe, using her knowledge of the students and their learning to plan a series of activities that not only suit the diversity of learners, but reflect curriculum intentions. As the lesson progresses, the students are required to utilise a range of skills and processes to deepen their knowledge of the content and the discipline area: they are required to *review, discuss, define, explain, identify, use, outline, propose* and *reflect.* The way in which the official curriculum is written suggests it is assumed students can already do these things, despite the fact they are in the first year of their formal high school apprenticeship in the discipline. The lesson outline lacks detail concerning how students are to *explain* or *identify* or enact any of the other skills and processes - the key scientific literacies – listed, whether in oral or written form or a combination of modes. The lesson outline lacks understanding and consideration of how key scientific literacies are developmental, and how they are to be developed through the content.

A review of the processes students are to undertake in their apprenticeships in the unit on cells demonstrates they could never expect to develop mastery in such an

environment where time limited repeated practice and only allowed brief exposure to key learning objectives, if that. During the unit, students were expected to *review, revise, discuss, define, explain, identify, use, outline, propose, reflect, replicate, observe, prepare, construct, compare, know, highlight, describe, draw and label* – all within the first four lessons. If these are the curriculum literacies students are meant to develop during their first year of high school, the unit outline provides no indication of how this is to occur, particularly simultaneously within a lesson with so many being highlighted in each lesson. There is no indication of whether each of these processes students were expected to conduct should have received equal treatment, or whether some are more significant in the discipline than others. If each unit outline across the year displays the same density of processes, then it is highly likely students will experience limited progression in their Science apprenticeship without greater refinement of curriculum goals.

5.2.2 Science – Assessment

The assessment task for Science was a C2C-generated task of a scientific report with a required word length of 500 words (Appendix 5). As the Australian Curriculum provides guidelines concerning content rather than assessment, Education Queensland's response has been to develop assessment tasks for each C2C unit. The task included three main components:

1. Section One – Students were required to (please note: words in italics were highlighted on the task sheet):

- select two specialised plant cells or animal cells with different functions,
- draw a *scientific diagram* of each cell
- describe the *structure and function* of the two cells
- research the placement and number of specific *organelles* in each cell
- *analyse* the function of the organelles in each cell
- explain why *different cells* have similarities and differences in organelle and structural features
- evaluate the importance of cell specialisation in the functioning of a *multicellular organism.*

2. Section Two: Students were required to:

- select *one* of the chosen cells from Section One
- research and explain the cell's *function* in the organism
- identify *potential problems* that can affect the function of the cell and the consequences for the organism
- outline how the application of scientific understanding leads to *treatments* being used to address these problems

3. Written report – an outline of the main components of the report, including the Introduction, Body and Conclusion, was provided to students

It was not clear until the third point on the task sheet that students were expected to use the information gathered in Parts A and B to construct their written report. Students were given three weeks (six lessons) to choose cells, conduct research, complete a draft and hand in final copies of the task.

As a literacy coach who works with staff across the school and advises them on the construction and design of assessment tasks, I was stunned by the complexity of the task and what students were required to do. Although I was familiar with the Year 8 Science curriculum, I found the expectations upon students were so demanding I could not conceive how they could demonstrate all the outlined requirements in one task. Students were expected to *select, draw, describe, research analyse, explain, evaluate* and *outline* – all within one task of 500 words. The word limit, on the one hand, seemed to be low for the broad list of literacies students were required to demonstrate. On the other hand, it seemed challenging for Year 8 students to meet the word length when compared to other subjects - for example Senior English, which has the same word limit requirements of 500 words in Year 11 for supervised tasks. Simone found it challenging to meet the word limit because she experienced difficulty in locating information on her chosen cells. Parts A & B of the task were detailed scaffolds, designed to introduce students to the concept of research journals to locate and organise information. However, I found students used

parts A & B as a list they ticked off when they located appropriate information. Therefore, the scaffolding in the task may have inadvertently lessened students' ability to write cohesive responses, because there were too many sections to complete. The task sheet provided no indication for example, of how all of the separate boxes in Part A could combine to form a cohesive whole; this is where an exemplar was required, to demonstrate how knowledge could be built through paragraphs, using language to ensure ideas made sense. The design of the intervention, then, was mainly focused on the writing of an exemplar to demonstrate how the information gathered could be organised cohesively, through textual structures such as paragraphs.

While each state authority adopting the Australian curriculum has responsibility for providing advice to teachers concerning what and when to assess, there is danger in state sanctioned and developed assessment tasks in the C2C units being interpreted as the most appropriate form of assessments for students at particular stages of learning. There has been no scrutiny of the design or appropriateness of tasks by educational experts and institutions outside the department. Without independent review, there is a risk that poor completion of tasks is perceived as a fault of the learner rather than the result of a poorly designed task. In an attempt to make the task more accessible for students, we planned the intervention around the use of an exemplar, hoping that it might provide some clarity concerning task expectations.

5.2.3 Science – Planned Intervention

The planned intervention for Science was the use of an exemplar (Appendix 6), with emphasis on the salient language and structural features of a Science report, including:

- Introductory Paragraphs
- The use of clause structure to expand information
- Theme and Rheme
- The role of relational verbs
- Use of technical and highly specialised vocabulary

I wrote the exemplar (Appendix 6), choosing two cells that were not part of the range of cells students could select from. The decision to write an exemplar was two-fold: firstly, to improve student understanding of task requirements by enabling them to conceptualise what a science report looked like; and secondly, I wanted to validate my assessment of the task as being too demanding. I did a little bit of research and chose pancreatic cells in consultation with the classroom teacher, because the pancreas had two main groups of cells that performed contrasting functions. During initial research, there seemed to be extensive detail about pancreatic cells on the internet. The frustration came when trying to find information to answer the points outlined in the scaffold. Many sites were too technically detailed, with explanations that assumed those who accessed the sites were professionals working in the field. Very few sites included age-appropriate explanations; therefore, I found I was continually re-reading information to try to make sense of it. Students' responses, outlined in the next chapter, demonstrated they did struggle with locating information at a level they could comprehend, with Isaac admitting in the individual interview that he did not understand some of the words he'd included in his report. As I observed students during the two research lessons, I noticed many of the boys tried to avoid reading, going straight to Google Images to find the diagrams they needed. These images were often difficult to understand without linking to the original texts the diagrams came from for explanations. When constructing the exemplar, I really had to think about how to link the separate points together, and I felt this would be the main challenge for students as well. That is why in the brief time allowed for explicit teaching of writing a science report, it was decided that paragraph structure and knowledge of Theme at the paragraph and sentence level would be beneficial for students when constructing their responses.

Teaching of the salient features of the exemplar occurred over two consecutive lessons, as students were completing their drafts. Students initially expressed surprise that I had written an exemplar for a Science task, when I was not a teacher of Science. During the first lesson, I concentrated on the introduction and the first body paragraph, where the structure and function of each cell was to be described, including diagrams as well. During the lesson, students were asked to review their introductions and rewrite them if necessary. In the body paragraph, through use of the exemplar, I focused on the processes or verb groups in the text,

which were mostly relational, with words such as “are”. I explained how this was a feature of scientific reports, where aspects of organisms or phenomena are generally described. During the lesson, I also focused on Theme or topic sentences at the paragraph level, and Theme at the sentence or clause level, focusing on the beginnings of sentences and the messages readers were being oriented towards. In the example paragraph about the structure and function of the two cells, I highlighted how the topic sentence referred to both cells, and then the function of each cell was described in turn. I also emphasised the use of connectives and phrases such as “on the other hand” to enable writers to signal contrasts between functions of the cells. Time was also given to students to review their first body paragraphs, if they had completed them, or to construct their first paragraphs.

The second lesson of explicit teaching was rushed, as students were late due to attendance at a parade. We focused on the second body paragraph, where students were required to identify the organelles in each cell and where they were located; compare any differences in the placement of organelles in each cells, and justify the placement of specific organelles for cell function. I firstly asked students to highlight in the paragraph where each of the points was answered. Again, the focus was on the importance of the topic sentence in signalling whether differences existed between cells, and why. We discussed how we signal comparison by beginning a sentence with the theme “An important difference”. There was also focus on how we justify information, using the following example from the paragraph:

> An important difference is that Acinar cells have more Rough Endoplasmic Reticulum and golgi, as demonstrated in Figure 4. This is because the Rough Endoplasmic Reticulum system modifies and transports proteins that have been newly manufactured as a result of the secretion of enzymes.

I used the word “identify” to show that in the first sentence, a difference between the two cells was being highlighted, but that it was important to follow with a justification as to why this difference occurred. In the next sentence, I used the word “explain” to demonstrate that it was necessary to show reasons why difference existed, and that this was signalled through the theme “This” and the processes “is because”. I also highlighted how writers of scientific reports make references to diagrams, and we also discussed the role of the concluding sentence of the paragraph in linking back to the topic sentence. Not as much attention was given to discussing

the features of the third body paragraph, due to time restrictions. Student responses to the science task will be explored in the next chapter to determine whether the explicit teaching of features of the report genre assisted them in writing their responses.

5.3 History – Unit Outline

The topic for History was Shogunate Japan, where students were required to produce an e*makimono,* a Japanese picture scroll which "*explains the significance of an individual incorporating influences on his/her life and major impacts he/she has had on wider society."* The emakimono was to be produced as a sequence of PowerPoint slides highlighting the influence, power and impact of a historical figure in shogunate Japan. As occurred in Science, Lesson 1 was based on the assumption that students retained knowledge of feudalism in Europe from a previous Year 8 unit of study, to enable them to draw comparisons between feudal Europe and feudal Japan. The unit was divided into three distinct areas of study:

- The first four lessons of study were focused on the social, political and economic features of Shogunate Japan, as well as the impact and decline of the Tokugawa Shogunate.
- The next four lessons were designed to assist students in the research process, including historical inquiry skills such as developing research questions; note-taking skills; and locating and referencing information
- The third set of four lessons allowed time in class for researching and drafting a response.

The Australian Curriculum references, highlighting the key curriculum literacies in history to be developed during the unit, are set out in the table that follows (Table 5. 5). Emphasis was to be placed on the development of Historical skills:

Strand	Focus within strand	Description
Historical knowledge and understanding	***Depth Studies***	The depth studies for this year level include: - The Asia/Pacific world (ONE of Angkor/Khmer Empire, Japan under the Shoguns, The Polynesian expansion across the Pacific
Historical skills	***Chronology, terms and concepts***	• Sequence historical events, developments and periods • Use historical terms and concepts
	Historical questions and research	• Identify a range of questions about the past to inform an historical inquiry • Identify and locate relevant sources, using ICT and other methods
	Analysis and use of sources	• Identify the origin and purpose of primary and secondary sources • Locate, compare, select and use information from a range of sources as evidence • Draw conclusions about the usefulness of sources
	Perspectives and interpretations	• Identify and describe points of view, attitudes and values in primary and secondary sources
	Explanation and communication	• Develop texts, particularly descriptions and explanations that use evidence from a range of sources that are acknowledged • Use a range of communication forms (oral, graphic, written) and digital technologies

Table 5.5: *History - The Australian Curriculum organising elements for Term 4*

Unlike Science, as part of the C2C resources there was an exemplar generated for the task. This was printed out and placed on the doors of one of the classrooms for students to access, so they could visualise what an emakimono looked like. The school planning documents and resources, adapted from C2C unit materials, did not

include reference to the *Literacy General Capability* in the Australian curriculum, and did not refer to specific grammar, word and language features required for a successful completion of the task. On the exemplar some of the structural features of specific power point slides were highlighted, but mainly related to the content students were expected to produce rather than how they should construct their response. The outline for the unit is set out in the table below (Table 5.6), which highlights the emphasis on content and research skills, but not on how information gathered was to be organised and represented in a report. This information is on the school network and can only be accessed by staff at the school.

Week	Lesson Outline
Week 1	***Lesson 1* – Way of life in Shogunate Japan** **Lesson objectives** Students will: Understand the social, economic and political features of Shogunate Japan and how they affected way of life. • Explore the focus on the unit and assessment requirements • Locate Japan as part of the Asia-Pacific World in time and place • Pose questions on the features of feudalism in Europe and Japan • Use sources to explore the way of life of significant people and groups • Draw conclusions about the way of life in Shogunate Japan
	***Lesson 2* – Japanese society: political, social & economic features** **Lesson objectives** Students will: Understand the way of life of significant individuals and groups living within a feudal structure. • Reflect on how provided sources described the way of life in Shogunate Japan • Review terms describing the feudal system in Shogunate Japan • Locate, select and use information from provided sources to examine the feudal structure of Shogunate Japan and record • Share findings and reflect on the nature of the feudal structure
Week 2	***Lesson 3* – Way of life in Shogunate Japan: cultural developments** **Lesson objectives** Students will: Understand the how significant cultural developments promoted particular beliefs and values in Shogunate Japan. • Review how provided sources describe the feudal structure of

	Shogunate Japan • Locate, compare, select and use information from sources to describe the cultural developments of Shogunate Japan • Identify in sources the attitudes and values held by key groups in Shogunate Japan • Reflect on how the sources identify significant cultural developments and describe the way of life in Shogunate Japan
	Lesson 4: Rise and decline of Shogunate Japan — The decline of Shogunate Japan **Lesson objectives** Students will: Understand the reasons for the decline of the Shogunate • Review how provided sources described the response of the Tokugawa Shogunate to deforestation • Understand that the power of the Tokugawa Shogunate was derived from a feudal system and subject to challenges • Determine the reasons for the decline of the Tokugawa Shogunate • Draw conclusions on the views of historians on the decline of the Tokugawa Shogunate
Week 3	***Lesson 5* – Guided Research — Part 1: Historical inquiry process** **Lesson objectives** Students will: Understand what makes an individual historically significant and worthy of further research. Understand task requirements and the historical inquiry process. • Review the requirements of the emakimono research assignment on a significant individual in Shogunate Japan • Review the range of possible individuals available as a focus for their research assignment • Understand what makes a person historically significant and what influences shaped them and how they in turn shaped society • Understand the historical inquiry process • Define the task
	***Lesson 6* – Guided Research — Part 2: Building note-taking skills** **Lesson objectives** Students will: Understand how to write historical questions, identify relevant sources for an historical inquiry, and record sources in a bibliography. • Review what makes a person historically significant and the impact of beliefs and values on their life experiences

	• Develop a range of inquiry questions for an historical inquiry about a significant individual in Shogunate Japan • Locate a range of sources to use as evidence • Record sources • Guided research
Week 4	***Lesson 7* – Guided research — Part 3: Guided research** **Lesson objectives** Students will: Understand that it may be necessary to refine and rework inquiry questions in response to research findings on the role and significance of an individual from Shogunate Japan. • Review guided research by considering the appropriateness of inquiry questions and the effectiveness of note-making skills • Understand note-taking skills • Evaluate research notes • Conduct guided research • Reflect on guided research by focusing on the range of sources located and the quality of notes taken and processed
	***Lesson 8* – Planning and creating — Locating and organising information** **Lesson objectives** Students will: Understand how to plan, draft and create an emakimono (Japanese picture scroll) on a significant individual from Shogunate Japanese. • Review task — creating a emakimono • Plan an emakimono by setting goals and reviewing research notes
Week 5	***Lesson 9* – Planning and creating — Reviewing and drafting** **Lesson objectives** Students will: Understand how to create an emakimono (Japanese picture scroll) on a significant individual in Shogunate Japan. • Review task elements and how to create an emakimono (Japanese picture scroll) on a historically significant individual • Review planning and research notes • Create a draft emakimono
	***Lesson 10* – Planning and creating — Drafting the emakimono**

	Lesson objectives Students will: Understand the significance of an individual in Shogunate Japan, incorporating key influences on their life and the impacts they had on society. • Review what makes a person historically significant and the impact of beliefs and values on their life experiences • Draft and create emakimono
Week 6	**<u>Lesson 11 & 12</u>** Final Copy due

Table 5.6: *Term 4 unit outline for History*

As in Science, the density of content information was overwhelming, particularly when individual worksheets were reviewed. From a historian's point of view, the worksheets provided rich reading for students and immersion in the culture and life of shogunate Japan, with the inclusion of many primary and secondary sources. However, one worksheet might contain 9 or 10 primary and secondary sources, with associated activities and inquiries, that could take lessons to complete rather than part of a lesson as was sometimes suggested. For example, in Week 2, Lesson 1, students were expected to develop knowledge of the cultural life of Shogunate Japan. The accompanying worksheet featured nine different primary and secondary source documents, including written texts such as first-hand accounts from historical figures, poetry, and commentary by modern-day historians; as well as visual texts, including paintings and photographs. While there is a breadth of texts to be explored, this lesson outline reflects the increasing complexity of texts that students encounter as the progress in their high school learning. The comprehension demands of reading such a variety of written and visual texts are significant, particularly when students are reading primary source documents such as a first-hand account from the time period of Shogunate Japan, and a commentary on the era written from the perspective of an historian hundreds of years later. However, with the compression of the unit due to time constraints, the source documents were skimmed for their content, denying opportunities to develop critical literacy skills such as how readers are positioned to accept particular viewpoints. It should also be pointed out that while 4 lessons were allocated for the teaching of information about

shogunate Japan, at the beginning of the unit the teacher told me she only had two-and-a-half lessons, due to unforeseen interruptions to the school timetable. At the completion of the unit, I was left wondering what it was that students had learned about hundreds of years of shogunate Japan in two-and-a-half lessons and from an investigation into a shogun's life. When looking at the historical impact of a person's life, you often have to consider it in terms of who and what has come before, and who and what has followed. While students may have looked at a timeline with the names of significant shoguns and other significant figures listed, they did not have an in-depth understanding of different periods and the figures who represented them.

5.3.1 History – Assessment

The History task (Appendix 7), a C2C-generated task, required the emakimono to roll from left to right, as was custom, and *"be illustrated by hand or digital images",* with written text accompanying the illustrations. Students were also to provide evidence of their *research journey,* either by hand or electronic, developing questions to frame their inquiry, selecting from a range of primary and secondary resources. A bibliography with a minimum of *five reliable resources* was also to be included, and required word length was 500 – 600 words.

> Create a Japanese picture scroll – an emakimono which explains the significance of an individual, incorporating key influences on his/her life and major impacts he/she had on wider society.
>
> Your scroll should roll from right to left in the fashion of Japanese emakimono and be illustrated by hand or with digital images. Written text (descriptions and explanations) should accompany your illustrations. Both the illustrations and the text must be based on and include historical facts, terms and concepts, and incorporate historically accurate images and symbols.
>
> ***Provide evidence of your research journey by producing a record of research (by hand or electronic). Here you need to demonstrate that you have developed questions to frame your inquiry, and selected, organised and analysed information from a range of primary and secondary sources on which to base your scroll and narration.***

Students were also directed *to Frame and Focus Your Inquiry*:

Use the following template to help you develop a key question which will frame and direct your historical inquiry. What is the historical significance of (*insert nationality, credentials and name of individual, and provide life dates in brackets)*? For example: What is the historical significance of Japanese Emperor Meiji (1852-1912)?

Emphasis in the assessment planning materials was given to the Historical Inquiry process, including research and note-taking skills, the framing of appropriate research questions, the value of researching from a range of sources, and correct referencing of those sources. In the school materials, there was no reference to the Literacy Capability and the key language and structural features of the task. On the task sheet, the creation of the scroll was emphasised – not the genre of a historical report examining the impact of a historical figure, in the format of a scroll. The report genre is one of the major genres of schooling, requiring students to describe the "attributes, properties, behaviours etc. of a single class or entity in a system of things" (Fang & Wang, 2011, 152). The opportunity to build knowledge of a key genre in history was lost through simply referring to the task as a scroll, rather than a report. Students saw that the task was designed to fit the theme, thus they would never do a scroll again unless they were studying Japan in later years. However, students do have to revisit the history report genre in subsequent year levels at school, and unless links are made explicitly to the Shogunate unit, they may not have realised they have already developed some knowledge of report writing that can be applied in later units.

5.3.2 History – Planned Intervention

The planned intervention for History was the use of an exemplar which I wrote based on an indigenous historical figure Jandamarra (Appendix 8), as I had been planning lessons on that text for English. The teaching of salient language features with reference to the exemplar occurred during 1 x 70 minute lesson, with emphasis on the salient language and structural features of:

- Introductory paragraphs
- Theme and Rheme
- Use of clause structure to expand information

The C2C-generated exemplar was used mainly to gain an understanding of the physical layout of the emakimono, including the placement of written and visual texts. The C2C exemplar was not used to teach salient language features as it generally did not provide a clear link between the research questions being asked, and the information used to answer the research questions. Although it can be difficult teaching the features of an exemplar you have not written, it was generally felt in discussions I had with the classroom teacher that the exemplar lacked consistency in terms of paragraph construction, particularly in linking topic sentences to research questions, which was considered to be an important feature of written texts in History. This will be further explained in the next chapter, which discuss adaptations to planned interventions in each subject, as well as individual student responses to assessment tasks.

The planned intervention occurred in response to students' drafts, and the common elements of the task they found challenging. Topic sentences was clearly identified as an area of need, as students' drafts demonstrated they were organising information according to a chronology of a person's life, rather than considering the broader questions of the influences on their life and the impact their life had on others. Also, some students' responses lacked information and details, which either highlighted they had not compiled enough research, or they did not know how to organise and represent the information they had collected. From the individual interviews at the end of the unit, it was clear from students like Noah and Connor that they did not know how to include the information they had, as after the lesson of explicit teaching, they said they had a clearer idea of what was required in the response. To demonstrate how to improve their drafts, I wrote example paragraphs based on the historical indigenous figure Jandamarra, as I had been developing activities on that text in English. I decided to focus on how I would respond to two of the main research questions outlined on the task, as I would not have enough time to teach the construction of the whole report. As in Science the emphasis was on Theme at the paragraph and clause level, and how language could be used to highlight influences on a person's life, and the impact that person had on the lives of others. Student responses, explored in the next chapter, demonstrate that after explicit teaching, students made improvements to their drafts, mainly to the topic sentences of their paragraphs.

5.4 English – Unit Outline

Indigenous Perspectives was the topic for the Year 8 Term 4 English unit. This was a school-developed unit with a written assessment task of an analytical response to literature. Students explored a range of texts during the unit, including a picture book and poems, but the main texts they studied were songs. The unit was not a C2C unit, although teachers found some resources in the C2C units that could be adopted during the unit. The Australian Curriculum references for the unit are set out in the following table (Table 5.7).

Literacy	Literature	Language
Purpose and audience Analyse and evaluate the ways that text structures and language features vary according to the purpose of the text	**How texts reflect the context of culture and situation in which they are created** Explore the ways that ideas and viewpoints in literary texts drawn from different historical, social and cultural contexts may reflect or challenge the values of individuals and groups Explore the interconnectedness of Country and Place, People, Identity and Culture in texts including those by Aboriginal and Torres Strait Islander authors	**Evaluative language** Understand how rhetorical devices are used to persuade and how different layers of meaning are developed through the use of metaphor, irony and parody.
Reading processes Apply increasing knowledge of vocabulary, text structures and language features to understand the content of texts	**Personal responses to the ideas, characters and viewpoints in texts** Share, reflect on, clarify and evaluate opinions and arguments about aspects of literary texts	**Text Cohesion** Understand how cohesion in texts is improved by strengthening the internal structure of paragraphs through the use of examples, quotations and substantiation of claims Understand how coherence is created in complex texts through devices like lexical cohesion, ellipsis, grammatical theme and text
Comprehension strategies: Use comprehension strategies to interpret and evaluate texts by reflecting on the validity of content and the credibility of sources, including finding evidence in the text for the author's point of view	**Expressing preferences and evaluating texts** Understand and explain how combinations of words and images in texts are used to represent particular groups in society, and how texts position readers in relation to those groups Recognise and explain differing viewpoints about the world, cultures, individual people and concerns represented	**Punctuation** Understand the use of punctuation conventions including colons, semicolons, dashes and brackets in formal and informal texts

	in texts	
Analysing and Evaluating Texts Explore and explain the ways authors combine different modes and media in creating texts, and the impact of these choices on the viewer and listener	**Features of literary texts** Recognise, explain and analyse the ways literary texts draw on readers' knowledge of other texts and enable new understandings and appreciation of aesthetic qualities	**Sentences and clause level grammar** Analyse and examine how effective authors control and use a variety of clause structures, including clauses embedded within the structure of a noun group/phrase or clause
Creating Texts Create imaginative, informative and persuasive texts that raise issues, report events, and advance opinions, using deliberate language and textual choices, and including digital elements as appropriate	**Language devices in literary texts including figurative language** Identify and evaluate devices that create tone, for example humour, wordplay, innuendo and parody in poetry, humorous prose, drama or visual texts Interpret and analyse language choices	**Visual language** Investigate how visual and multimodal texts allude to or draw on other texts or images to enhance and layer meaning
Editing Experiment with text structures and language features to refine and clarify ideas to improve the effectiveness of students' own texts		**Vocabulary** Recognise that vocabulary choices contribute to the specificity, abstraction and style of texts

Table 5.7: *English – The Australian Curriculum organising elements for Term 4*

From the outline presented below (Table 5. 8) it can be seen that even though Term 4 was a ten week term, assessment had to be completed by Week 7/8 to comply with school reporting deadlines. The unit outline and resources are accessed on the school's intranet, with teachers encouraged to add resources that they have found useful in the classroom. The Year 8 units have been developed and reviewed by Year 8 teachers, with two of the teachers acting as co-ordinators for the year level. Their roles are to plan assessment dates, co-ordinate the dissemination of information to other staff, organise and conduct moderation meetings, and conduct reviews of the curriculum in consultation with other teachers of the year level.

Year 8 English

Term 4 Indigenous Perspectives

N.B. Assessment will require students to complete notes in the *Analysis of Text* sheet and then transform this information into sentences/ paragraphs. When the *Analysis of Text* sheet is being used in class, transformation into a response should be explicitly modelled and practised.

Week 1	**Introduction – Indigenous Perspectives**
	• Review what a literary text is (term 3) and what literary texts will be covered this term – songs, poems, visual texts, extracts from novels, extract from play script, exposure to dreamtime stories.
	• Throughout this unit both indigenous and non-indigenous authors' works will be deconstructed.
	• Introduction/overview of key historical concepts
	  • Literary Timeline – discussion of key background concepts
	  • The Aboriginal Civil Rights Movement (28 mins CLICKVIEW) and worksheets
	• Introduction to Indigenous texts through following activities
	  • Yarning Circles – model of how Indigenous have discussed issues for thousands of years. Students to discuss current affair issues (not necessarily Indigenous content) Missions and Reserves information sheet can be used
	  • Babakiueria (30 mins CLICKVIEW) various perspectives and worksheet
		Yarning Circles Sheet
		
		Examining Texts Ppt
		
		Babakiueria worksheet
		
		Literary Timeline

Week 2	**Visuals** Visual analysis using Visual Analysis of Text sheet which will be used later in the term for assessment. Other visual texts can be used if applicable. • Shake A Leg – Boori Pryor • watch the trailer of ….? • complete visual analysis of text sheet as a class	'Shake a Leg' by Boori Pryor (Textbook Office) VIDEO - Shake a Leg Visual Analysis of Text **Additional Resources** Indigenous Posters - G:\Coredata\Curriculum\English\Year 8\Indigenous Perspectives\Week 4
Week 2/3	**Songs** Songs analysis using Analysis of Text sheet. Other songs can be used if applicable. • Great Southern Land – Unit (Insight English Skills 7, pg. 50-54) • Solid Rock • We Are Australian • Black Tears – Powderfinger • From Little Things Big Things Grow – Paul Kelly • Beds are Burning	**ANALYSIS OF TEXT SHEET** Great Southern Land (Insight English Skills 7, pg. 50-54) VIDEO- GREAT SOUTHERN LAND (ORIGINAL) VIDEO – GREAT SOUTHERN LAND (VERSION 2) Lyrics – Great Southern Land
Week 4/5	**Poetry** Poetry analysis using *Analysis of Text* sheet. Other poetry can be used if applicable. *Examining Text ppt links to Analysis of Text sheet* • We Are Going (Oodgeroo Noonuccal) – Analysis of Text Exemplar (transforming notes into sentences/ paragraphs) • No More Boomerang (Oodgeroo Noonuccal) and Conclusion (Bill Neidjie) Poem: 'Municipal Gum' Unit – (Insight English Skills 7, pg. 44-48). Provides contextual background information to Oodgeroo Noonuccal and poetic techniques.	Analysis of Text Exemplar Analysis of Text Sheet We Are Going No more boomerang / Conclusion Municipal Gum (Insight English Skills 7, pg. 44-48).

Week 6	**Formative Assessment – analysis of song *Took the Children Away* – Archie Roach** **Lesson One –** • Handout formative assessment piece and listen/ watch song (youtube). • Students to complete Analysis of Text sheet (sheet must be handed in at the end of the lesson). **Lesson Two –** Give students the entire lesson to finish note taking and complete literary analysis. Collect at end of lesson. Provide general class feedback.	Lyrics – Took the Children Away
Week 7	**Novel and Play Script Extracts** Analysis of novel and play script excerpts – using Analysis of Text Sheet. *The Girl With No Name* by Pat Lowe (Insight English Skills 7 pg. 68-72) *Box the Pony* Leah Purcell (Macmillan English 8 pg.92-93)	The Girl With No Name (Insight English Skills 7 pg. 68-72) Box the Pony (Macmillan English 8 pg.92-93) **Additional Resources** My Girragundji by Boori Pryor (Library)
Week 7/8	**EXAM** **Lesson One –** • Handout Assessment piece and read the picture book 'The Rabbits' to the students. • Students to complete notes on Analysis of Text sheet (sheet must be handed in at the end of the lesson). **Lesson Two –** Give students the entire lesson to finish note taking and complete literary analysis. Collect assessment at end of lesson. Enjoy.	*The Rabbits* – John Marsden and Shaun Tan (Textbook Office) ***Due to limited number of texts, this exam is to be completed over a 2 week period. It is very important that the text is returned to the Textbook Office at the end of every lesson and not left in classrooms.***
Week	**Movie Analysis – Bran Nu Dae (Clickview) or Australia or**	Bran Nue Dae (Clickview)

9	**Rabbit Proof Fence**	
Week 10		

Table 5.8: *English – Term 4 unit outline*

Even though at the beginning of the unit outline it is stated that "transformation into a response should be explicitly modelled and practised" it is not specifically referred to in the unit outline for each week. Lesson outlines provided no indication of which texts should be modelled and practised, when this process should begin, or the scaffolding that should occur during this stage. It is also assumed that teachers understand what is meant by the terms "modelled and practised", because there is no accompanying explanation of those terms. With 12 different classes and teachers of Year 8 English, there can be great divergence in when, how and if modelling and practising of responses to literature occurs. Graduate teachers and teachers in the early years of the careers may require a substantial amount of guidance and support concerning how this unit outline should be transformed into classroom practice.

Another thing to note is that students were to analyse texts in class using the resources of Appraisal, where they were to consider how language was used by authors to appeal to emotions (Affect); make judgments of people (Judgment); and to evaluate objects, such as literary or artistic works, people's appearance or other natural or man-made phenomena (Appreciation). While these terms were explicitly referred to in the exemplars, as well as on the *Text Analysis Sheet*, they were not specifically referred to in the unit outline. Students had been exposed to these terms during Semester 1 when they studied a class novel as well as media texts, but it is not explicitly stated in the unit outline that teachers should link to past units and review previously taught knowledge. While experienced teachers might do this as a matter of course in their teaching, it cannot be assumed that graduate teachers and those in the early years of their careers would necessarily link to past units, particularly if a change of teacher ensues after semester 1, as did occur when two of the Year 8 teachers went on maternity leave. In the classroom I observed, evaluative language was reviewed in the first week of the unit and applied in the deconstruction of each task studied in class in subsequent weeks. Evaluative language posters were displayed at the front of the room, above the whiteboard, to remind students of the definitions of specific language features.

5.4.1 English – Assessment

The response to literature task (Appendices 9 & 10) was conducted in class over two lessons under supervised conditions, where students were required to analyse an excerpt from the picture book *The Rabbits*, written by John Marsden and illustrated by Shaun Tan. Students were given prior notice of the topic, but not the text that was being evaluated. The intention of this task design was to apprentice students into a key literacy required in the English curriculum – responding to texts under supervised conditions. The task design has changed in recent years, as originally students were given a text with short notice to respond to, meaning students were given a text and a task with three days' notice to allow them to plan and prepare responses at home. Although the text may not have been previously encountered by students, they had previous exposure to the task through repeated practice with other literary texts of the same type. Students were then required to write their responses under supervised conditions at school over a couple of lessons. However, after attending a Year 7 English moderation meeting of conducted by staff from the school's main primary feeder schools the year before, the teachers changed the task in response to what they perceived was a challenging Year 7 essay response. The point has to be made here as to whether the Year 7 task, a C2C task, was appropriate for the age level of the Year 7 students. Although the majority of the students in the class came from the school's main feeder schools, which are all following the C2C materials, some of the students in the class had not experienced a C2C curriculum in their schools. So rather than build upon knowledge assumed to have already been developed in Year 8 students, teachers should consider the appropriateness of the task for the Year 8 age group.

For each text analysed in class, students were given an *Analysis of Text* sheet (Appendix 11) to assist them in analysing specific visual and language elements of the text, in preparation for writing paragraphs for their response. Students were given opportunities for repeated practice throughout the term using the same *Text Analysis* sheet to deconstruct a variety of texts. Required length of the response was 300 – 400 words. The task was described as follows:

Context:

During this term we have read and deconstructed a variety of texts which present indigenous perspectives. We have examined view points, themes and evaluative language within these texts. We have also looked closely at how to take notes and transform these notes into grammatically correct sentences and paragraphs. The following task will enable you to demonstrate what you have learnt this term.

Task:

You are to analyse an excerpt from the picture book "The Rabbits" by John Marsden and Shaun Tan using the attached "Analysis of Text" sheet. You will then use these notes to write a literary response to the text. You will need to write in well-constructed paragraphs. You will need to include specific examples from the text to support your analysis.

Conditions:

- 300-400 words
- In-class assessment
- Students may bring the "Analysis of Text" sheet into the exam
- Assessment handed out at beginning of Week 7 *or* 8
- You will work on this task in class

5.4.2 English – Planned Intervention

The planned intervention for English was based on the use of two exemplars. Staff members had written an exemplar for a literary response to the poem, *We are Going*, by Oodgeroo Noonucaal (Appendix 12), analysing the structure and salient language features of the response. Teachers also used an exemplar written by a student the previous year, analysing the text *Shake a Leg* by Boori Prior, which focused on an analysis of the visual as well as the written elements of the text. Whereas I taught the lessons with an explicit focus on writing in the subjects of Science and History, the class teacher conducted the lessons in English, with an emphasis on:

- Analysing how writers use language to make evaluations of a range of people, subjects and phenomena - Affect, Judgment and Appreciation
- Modelling how to use the *Text Analysis* sheet to respond to a variety of texts
- Modelling how to use information from the *Text Analysis* sheet to construct paragraphs

- Using clause structures to expand information
- Using language to make evaluations of texts
- Paragraph structures

During the course of the unit, students were given opportunities for repeated practice in responding to tasks, including a practice test conducted under similar conditions to the actual assessment task. The teacher would also adjust her teaching to meet the needs of the learners. For example, in one of the lessons I observed, students completed the Text Analysis Sheet, with time for individual and shared responses. They were then asked to write the introduction for a response to a song, as well as a body paragraph about Affect. The teacher walked around the classroom answering questions from students, and observing their responses. Noticing that some were struggling with writing the introduction, the teacher adjusted the lesson to guide students through the creation of an introduction by demonstrating how the Text Analysis sheet could be used to provide information. She asked students questions that were not just about the content of the song, but how language could be used to represent information. The teacher used students' suggestion and her own think aloud processes to draft an introduction on the white board, making revisions as she went. While students appreciated the opportunity to practise their writing and receive feedback for further improvement, the text they were given for the assessment task was a picture book, and they had only studied one picture book, *Shake a Leg* by Boori Pryor, in the early stages of the unit. The students had not revised visual language before they completed the task. Even though students were given an exemplar written by student the previous year in response to *Shake a Leg*, they had not had the opportunity themselves to write a response combining written and visual elements.

Students' knowledge of writing literary responses was effectively scaffolded across the unit, with multiple opportunities for modelled, guided and independent writing. Depending on the nature of the text being studied, the teacher would adjust her teaching to meet the needs of the learners, particularly when students identified they were struggling with analysis of a text, or writing a response. The teacher also demonstrated use of evaluative language in modelled and guided responses demonstrating how language could be used to analyse texts and position readers.

She focused on combining clauses for greater sentence complexity, and how students should justify their responses by providing examples of the text. The teacher also demonstrated to students how they should explain the impact of an author's language choices on the reader. These processes enabled students to develop confidence in their writing, as was evident in the group and individual interviews. However, as explored through students' responses in the next chapter, some did not understand Appreciation, even when they were writing their responses, and they expressed anxiety about responding to a text with both visual and written elements. In English, the process of writing was not the main challenge, but mastery of the content, and the design of a task to best reflect the learning conducted in class.

5.5 Competing Assessment Demands

Even a cursory look at the unit outlines and assessment for the subjects of Science, History and English highlights the significant challenges students encounter in their daily school lives as they move from one subject to another. There is significant content knowledge that students must know and understand, as well as skills they are expected to acquire, before assessment can be attempted and successfully completed – all within a specific but seemingly-limited frame of time. This was summed up by Bridget, when writing a reflection about the challenges she faced in completing written assessment during the year:

> The most challenging thing about completing some written assessment is not enough time such as a few at time: SOSE assignment, Science assignment, German exam, English exam, Maths exam.

In the Science assessment task, students had to *select, draw, describe, research, analyse, explain, evaluate* and *outline* information about cells, in a unit encompassing 12 lessons. While the content for the unit is outlined, there is no indication how these important curriculum literacies in Science are to be developed during the unit, through exposure to the content. Giving students time to research does not mean they know how to research effectively; telling students to analyse information is not the same as delivering information about the structure of cells, and then hoping students will be able to use language to analyse why different cells have different structures. In History, students were required to explain the significance of an individual, incorporating key influences on his/her life and the major impacts he/she had on wider society. However, in their two-and-a-half lessons of content for

the unit, students were only minimally exposed to significant figures in Shogunate Japan, and certainly not in how to evaluate primary and secondary sources in terms of influences on an individual and their impact on society. In English, students had to analyse a text for its evaluative language features, plan and write a response analysing those features, ensuring paragraphs were well-constructed. The task required greater specificity as directions were not clear enough to indicate to students what they were to respond about, or how. It was only through repeated practice in the class involved in the study that students knew how to respond, but that was negated by the choice of a text for assessment that students had not practised in a class response. The assessment tasks demonstrate the significant shifts in thinking, reading and writing that students not only make within subjects, but a across subjects, and they do not represent the totality of a Year 8 student timetable.

Not only do students have to complete assessment in all of their subjects, but adding further pressure are tight assessment schedules that result in summative assessment in all subjects being due at essentially the same time. Assessment schedules at the school are driven by internal reporting guidelines, which for staff and students during the term under study, resulted in all assessment having to be completed by Week 8 in a ten-week term. Staff set assessment due dates as close as possible to reporting deadlines to maximise students' opportunities to demonstrate their learning, but for students, this meant they had to be able to manage a number of competing demands simultaneously to ensure they handed in assessment by due dates. For many Year 8 students, this is a skill they have yet to develop. For example, for their History assessment, all of the eight students interviewed were assembling their scrolls the night before, or on the morning that they were due. This didn't necessarily reflect poor time management, but the fact that as well as completing assessment in other subjects, students had three weeks – six lessons – in which to interpret the History assessment task, choose a person to research, complete their research, complete a draft of the task, and act upon feedback they received to complete the final copy of the task. As part of their apprenticeship in disciplines, students not only have to master knowledge and skills in specific disciplines, but organise their time in class and at home to manage competing assessment demands.

Competing assessment demands must also be considered in the broader educational context of systemic requirements such as the implementation of the Australian curriculum, which is placing added pressure on teachers and students, particularly in terms of what is to be taught, and in what depth. The Queensland Department of Education, Training and Employment (DETE) has responded by seconding teachers to write programs and units of work that reflect the aims, knowledge, skills outlined in specific subject areas, as well as .the broader General Capabilities such as Literacy. These units of work in English, History, Science and Mathematics, as part of the C2C project, are followed in the majority of Queensland State Primary schools, as well as a large number of state high schools.

While it has not been the intention of the study to critique C2C units per se, the official curriculum for Science and History in the school has been adapted from C2C units and thus requires scrutiny in this context. As the teachers involved the project and other Year 8 teachers at the school would attest, particularly in the subjects of Science and History, all of the content and activities suggested in the C2C units could never hope to be implemented within existing constraints upon school timetables. The unit overviews, lesson plans, worksheets and activities generated for each unit are focused mainly on the discipline knowledge to be learned and demonstrated in assessment responses.

While the Literacy Capability may be referenced in unit and lesson outlines, there is lack of detail concerning, in particular, the specific grammar and text knowledge to be developed in each unit and for each assessment task. In fact, not once – in any of the three unit outlines – does the word "write" appear as a task students should be engaged in, and a skill they should be developing. The only task sheet to include the word "write" was the English task. In the science task, students do everything – select, draw, analyse, outline, research, explain – but write, with the third point on the task sheet saying "Written response". The agency is taken away from the student, and so is the emphasis on writing skills in the presentation of the selecting, drawing, analysing, outlining, researching and explaining students have had to demonstrate. In History students "create" an emakimono scroll that includes written text, thus the emphasis is on creation of the physical attributes of the scroll, not the key genre of a written report. Assessment scaffolds such as the one provided

for the Science task concerning cells, and exemplars such as the emakimono scroll accompanying the History unit, do not encompass the depth of knowledge about language students are expected to acquire as a general capability in all of their subjects. In all of the unit outlines presented – Science, History and English – there is an absence of explicit detail about when, where and how students should develop and practise their writing, which is the major form of assessment in all three subjects in the study. If teachers do not adapt and amend unit outlines to include explicit teaching of the ways in which specific disciplines represent knowledge through written texts, then there are significant gaps in students' apprenticeships in the disciplines.

5.6 Chapter Summary

This chapter has given consideration to what school represents for a Year 8 student, in terms of subject and assessment demands. Although students might articulate that they do not find it difficult to change subjects four times a day, and experience 13 subjects throughout the year, the unit outlines and assessment tasks of three subjects highlights that there are significant shifts students must make in their thinking, reading and writing as they move across disciplines, terms and semesters. More importantly, the design of those unit and assessment tasks does not allow for the development of key curriculum literacies, particularly writing, in the subjects of Science, History and English. In the next chapter, an examination of students' responses in those three subjects highlights how poor design of units and tasks is resulting in considerable gaps in students' knowledge within the disciplines, and that further apprenticeship requires significant changes in current content approaches to ensure knowledge of language is emphasised.

Chapter 6: They're all difficult…

Questionnaire: *What has been the most challenging thing about completing written assessment this year?*

James: *They're all difficult. Trying to find what words to write about the subject.*

6.1 Introduction

Despite students' assurances that shifting between subjects and assessments is relatively easy, they do find it challenging meeting varied subject demands within specific timeframes. For Year 8 students, the reality of school assessment and reporting deadlines means they are being assessed simultaneously in a range of subjects. An examination of a term's planned assessment in Science, History and English highlights how students struggle to effectively demonstrate their learning when unit plans are crowded with too much content detail, combined with poorly-designed tasks and an absence of the explicit teaching of writing. With limited time allocated to the teaching of writing within specific disciplines, students flounder and most explicit teaching episodes fail to progress beyond a focus on the textual function of language, specifically text structure and organisation. At the least, students require exemplars to guide construction of the texts they are expected to produce, particularly when task sheets are either too convoluted or too simplistic to enable students to conceptualise what the final response is meant to look like. For Year 8 students everything must be treated as new: new school, new teachers, new timetables and new types of assessment. If teachers share a common goal of students developing knowledge of how disciplines organise and represent information in specific ways, then emphasis must be given to knowledge about how texts are structured rather than completing assessment.

Chapter Outline

In the previous chapter, the planned curriculum evident in national, state and school curriculum documents for the subjects of English, History and Science was evaluated, with specific consideration of literacy and assessment demands. The focus of this chapter shifts to the enacted curriculum, "what occurs in the classroom as the curriculum framework is interpreted by the classroom teacher in the interaction with a cohort of students in a geographical or institutional context"

(Wyatt-Cummings & Smith, 2003, p. 50). This chapter explores the enacted curriculum in the domains of Science, History and English, providing insights concerning the adaptations made to unit plans and learning activities, and the internal and external constraints impacting on teachers and students. The enacted curriculum will be explored through student responses to the assessment tasks already outlined in the previous chapter during a Term 4 study in the subjects of Science, History and English. Each unit of work and its associated assessment task will be examined in turn, largely through the oral and written responses of students, to ascertain the outcome of planned interventions to learning in specific subject domains. Firstly, the assessment and planned intervention for the Science unit about cells will be explored (6.1), followed by an evaluation of the Shogunate of Japan, History unit (6.2), then an analysis of the planned intervention for Indigenous Perspectives in English (6.3). An examination of the planned interventions in each subject, along with students' responses to assessment tasks, will provide data to answer the research question 3: *Does the explicit teaching of writing, particularly from a functional language approach, in a number of specific subjects concurrently have a positive impact on student learning?* Students' responses to the assessment tasks will also further reveal *what knowledge of curriculum literacies they do have in Year 8, and how that knowledge develops during a unit of study (Research Question 1).*

6.1.1 The Science Domain

Curriculum plans and unit plans provide teachers with broad guidelines concerning what is to be taught in a particular timeframe, most often leaving out how particular domains of knowledge should be taught. Unit plans are prescriptive enough to ensure consistency across classes, but not so prescriptive that they do not make allowances for differences in the teaching pedagogies and approaches of individual teachers. Probably the least amount of detail in high school unit plans occurs in the assessment period of the unit, including the lessons leading up to the assessment task where students plan, research if necessary, and draft and edit their responses after feedback. This can lead to the greatest variability between classes in terms of assessment preparation. As part of their practice, some teachers provide model written responses for students, work together with students to draft responses in class, and monitor students during the drafting process, continually discussing

with individual students how they are organising information, what has been included and excluded in their responses, and how to use language to more effectively demonstrate their understanding and analysis of a topic of study. However, it cannot be assumed that this is the practice of all teachers, particularly those who have not been exposed to professional development opportunities in literacy. If unit plans do not clearly outline how students should be prepared for and guided through the writing of assessment responses, then it cannot be assumed this will occur in all classrooms.

As highlighted in the previous chapter, despite references to the Literacy Capability in the "Cells" unit outline for Science, there was no specific guidance concerning how students should be prepared for the reading and writing required for their assessment task. The lesson outlines directed teachers to discuss the assessable elements of the task with students, ensuring they understood both the task and the criteria they were to be evaluated against. This Science task was very difficult to read, as it was divided into three parts, and required students to interpret what they had to do, and how they were to present the information as a report. Students were expected to demonstrate knowledge of cells as well as select, draw, describe, research analyse, explain, evaluate and outline – all within a coherent 500 word report. Students' responses highlights the complexity of the task requirements and the challenges they faced in meeting those requirements.

6.1.2 Science - Task Design

As an outsider to the discipline of Science, I found the task to be complex and demanding. The cover page stated that it was a *Factual scientific report written in passive voice/third person*, to include three parts:

A. *A diagram and analysis of the structure of two specialised plant or two specialised animal cells that is related to their function.*
B. *How understanding plant or animal cell function contributes to developments in health treatments.*
C. *A scientific report.*

A detailed scaffold was provided for parts A and B to promote the importance of research in the process of scientific investigations, as well as to provide students with an idea of what information should be included in the final document – a scientific report. Simone said she found the scaffold "useful"; Noah said it was "quite useful", and Isabelle said it "definitely" helped in preparing for the assignment. Bridget was more explicit, saying "it helped organise the structure easier", with the questions on "the draft thing on the side" helping when writing her response. For James, the scaffold "helped a little bit, but not overly that much", because he said he did not really understand how to set out the response. This highlights that while students generally found the scaffold helpful in organising information required for the report, some students faced challenges in comprehending how the sections of the scaffold combined to make a whole text.

Despite the scaffold provided, some students did not realise that the final product was a scientific report. When asked whether she knew what a scientific report looked like, Bridget said: "I don't know". She wasn't sure whether she had completed one in primary school, and she said she "guessed" what she had produced was a scientific report. Simone also could not visualise what a science report looked like without the exemplar to guide her. Isabelle said she did not know what a science report looked like, even after completing the task for assessment. Only Connor said he had done reports in Year 7 "kind of like this except not so big. Maybe like a few paragraphs, but no so much, and it didn't have to be as good as this." Use of the word "good" implies greater expectations in Year 8 concerning both the structure and language use to be demonstrated in the task, as Connor elaborated by saying the language had to be like a "debate – more formal". Connor's response signifies he understands scientific report writing requires formal rather than everyday language, likening the construction of the response to preparation of a debate, which has specific requirements in terms of structure. Whilst the scaffold provided detail of the specific content required in each paragraph, students generally found it difficult to conceptualise how to construct their paragraphs for the report, and required the exemplar to assist them. This highlights that detailed scaffolding can be counter-productive if students have no concept of the type of text they are producing. As the scientific report genre is an archetypal text within the Science domain, it is

concerning that students can complete a report without an implicit understanding of its key structural and language features.

Another element of the task design that could be improved was the structure and use of the criteria sheet. The front cover included a grid, used to record students' results in three key criteria:

Knowledge **Science Understanding**	**Knowledge** **Science as a human endeavour**	**Overall**

On students' task sheets, they had crossed out the word "overall" and had written "communicating" instead. These three criteria, however, did not match the criteria included on the matrix at the back of the task sheet, which included the following criteria and elaborations (Table 6.1):

Knowledge and Understanding	**Investigating Science**	**Communicating**
Describes the structure and function of two different types of cells Explains how scientific knowledge has been used to identify treatments that affect an organism's health	Researches information regarding cells, potential problems and treatments	Uses scientific and everyday language and representations (Sections 1, 2 and 3)

Table 6.1: *Science Assessment Criteria*

The three strands assessed in the Australian Curriculum are *Science Understanding*, *Science as a Human Endeavour*, and *Science Inquiry Skills*, of which *Communicating* is an identified skill. Thus, both the front cover and criteria sheet need to be updated to reflect more current terminology.

The criteria students performed most poorly in was *Knowledge of Science as a human endeavour*, according to their marked responses, where students were required to research and identify problems that could result from changes in cell

structure, as well as consequences and possible treatments. This information was to be included in the third body paragraph of the report and reflected one of the key content objects of the unit, that students would explore cell theory and the work of key scientists in the field. As part of their studies, students were to examine investigations conducted by well-known scientists, as well as the validity of their results. This was in addition to students learning about the structure of cells and how they varied from animal to plant organisms, as well as learning more practical skills such as how to use the microscope, prepare and mount slides, and draw diagrams of slides. As students only had 10 lessons from the start of the unit until drafts of the report were due, the content emphasised in class was the structure of cells and use of the microscope. There was not adequate time to be able to explore cell theory in depth, particularly to the degree outlined in the C2C materials. Thus, students' responses and results reflected what was emphasised in class, with most achieving a sound result or higher for their understanding of cell structure, but performing worse in the *Knowledge of Science as a Human Endeavour* criteria relating to their understanding of cell theory. This demonstrates the importance of linking classroom learning to assessment – if it was not learned in class, then it should not have been assessed.

6.1.3 Science Exemplar

I wrote the exemplar to see how the different parts of the scaffold fit together as a whole, because I also had difficulty conceptualising what the final product of a science report looked like. I chose to write the exemplar about pancreatic cells, because they were not part of the range of cells students could select from. The process of writing the exemplar was laborious and time-consuming, partly because I was an outsider to the domain, but also due to the challenge of researching and locating required information. My greatest struggle was in locating information I could understand and that would also be at an appropriate level of understanding for students. I had to scan many sites as searches would invariably lead to highly technical journal articles that far exceeded a novice level of comprehension. Another difficulty was that sites that were more suited to a novice level of understanding would not be accompanied by diagrams of organelles in the detail specified on the task sheet.

The majority of students found the exemplar helpful when constructing their responses. Of the eight students interviewed, only Bridget and Lisa said they did not use the exemplar. Bridget had been away during the two lessons of teaching using the exemplar, but said, "I guessed I could have maybe looked at them more and compared them with mine." Lisa did not use the exemplar because she said she just "wanted to get it (the assignment) done." Students found the exemplar most useful in providing them with guidance concerning how to structure the report or "where to put the stuff" (Simone). Connor reinforced Simone's evaluation of the exemplar, saying it:

> helped quite a bit. It helped me to do the layout, to help me know what types of paragraphs to write and everything.

James also agreed the exemplar was useful in guiding him in the construction of paragraphs, as he said he did not really understand how to set out the report:

> The example paragraphs...um…with my introduction they helped a bit and also with putting them for the first bits of the paragraphs, and then I'd sort of do stuff off…with…the whole thing.

For Connor, he was "really using it towards the end, about this page (pointed to page) and then the conclusion." Isabelle found the exemplar useful as a checkpoint for her work:

> I definitely used the exemplar. When my parents checked my work they looked at the exemplar.

Students' responses indicate that they mainly used the exemplar to guide the structure and layout of the report, but they did not overtly use it to focus on the language demands of the task. There is some evidence in students' work that the exemplar did assist them in the structure of their reports, particularly the introductory paragraphs, which will be discussed in the next section.

6.1.4 Report Structure – Introductory Paragraph

Students' responses in Science indicate there is potential for explicit teaching of structure and language features to assist students in understanding how science texts are organised for specific purposes. One feature explicitly taught was the structure of an introductory paragraph for a report. The scaffold on the assessment sheet stated that for the introduction, students were required to: *Introduce the two specialised cells being investigated*. Students were provided with two example

introductions in their exemplar, with an emphasis on outlining the context – where students were encouraged to "*tell the reader what you are studying and why it is important to read about"* (from the exemplar handout). Most students provided a context for their report in their introductory sentence, with Isabelle and Lisa using the examples given:

Isabelle: Animals have a large number of important cells that they need to survive: Two important cells are muscle and bone marrow.

Lisa: Animals have a large amount of important cells that they need to survive. Two important cells are skin cells and red blood cells.

Other students attempted variations of the same introductory sentence:

Noah: Animals have many types of cells in their body but the two most important cells are white blood cells and red blood cells.

Connor: All living things need cells to function; two important cells are the red blood cell and the kidney cell.

Mack's and Isaac's introductory or context sentences showed a change in the orientation or beginning of the sentence, referred to as Theme in functional language. This was explained to students during the lesson, with Mack and Isaac choosing to emphasise their chosen cells, and then their importance in the body system:

Mack: All animal bodies contain white and red blood cells. They are an important part of our body system.

Isaac: The red blood cell and muscle cell both perform vital functions that the body needs to survive.

Liam's work also showed a change in the orientation, beginning with "The following document is investigating" which students stated during the group interview was how they were encouraged to begin a report in Year 7, although not in Year 8:

Liam: This document is investigating two important cells: the white blood cells and the red blood cells. These cells are vital in keeping the organism alive.

Bridget, who said she didn't use the exemplar, did not attempt to write a context sentence. Bridget was also absent when the exemplar was used in class:

Bridget: Two specialised cells are hair cells and guard cells or stomata.

During the explicit teaching lesson, the introductory paragraph was discussed at the beginning of the lesson, when students were perhaps at their most attentive, hence most responses showed that students had given specific thought to how they were going to structure their introductory paragraph.

6.1.5 Report Structure – Textual Function of Language

As the explicit teaching of writing was limited by time, emphasis in class was on the topic sentence and paragraph structure. These are aspects of the textual function of language, where consideration is given to how language is used to organise information in the text through features such as paragraphs and topic sentences (referred to as hyperthemes in Systemic Functional Linguistics). The standard paragraph structure taught in the school was reviewed with students, evident in the following table (Table 6.2):

T	Topic (or the point you will be exploring in the paragraph)
E	Elaboration (further explanation of your point)
E	Evidence (examples, statistics, etc)
L	Linking back (re-statement of your point, using different language)

Table 6.2: *Paragraph structure taught across the school*

The term *topic sentence* was used to refer to the introductory sentences of each paragraph, as this was the common terminology used across the school. Students' responses demonstrate they could benefit from further exposure to explicit teaching of paragraph structure, particularly topic sentences. Table 6.3 outlines the scaffold for Paragraph One given on the task sheet was:

Paragraph One <u>Cell structure and function</u>	Describe the structure and function of each cell.	
	Draw a detailed diagram for each cell	

Table 6.3: *Science - paragraph one scaffold*

In the exemplar given to students, the topic sentence for Paragraph One referred to the two cells being studied:

> The pancreas has two different types of cells: Islets of Langerhans and Acinar cells (Fig. 1)

The function of each cell was then explained in turn. Only Mack replicated the same structure in his response:

> Red blood cells (RBC) and white blood cells (WBC) have very different structures.

Mack was also the only student to correctly make reference to his diagrams:

> The RBC is bioconcave in shape and has no organelles other than the cell membrane (Refer to Fig. 1).

While other students included diagrams as required, they did not follow the convention of referring to the diagrams in their written texts, thus linking written and visual information. All other students began Paragraph One by discussing one specific cell, then discussing the features of the other cell in the second half of their paragraph.

The second body paragraph, where students were required to discuss organelles and cell function, showed that students would benefit from further reinforcement of the importance of topic sentences. For the majority of students, this paragraph represented a significant challenge as the task required the comparison of organelles of each cell, noting similarities and differences and explaining why such differences occurred. This demanded not only an understanding of organelles and their functions, but an ability to interpret scientific information to form conclusions about differences and similarities. The scaffold for the paragraph was as follows (Table 6.4):

Paragraph Two <u>Organelles and cell function</u>	Identify the organelles in each cell and where they are located.	
	Compare any differences in the placement of organelles in each cell.	

Table 6.4: *Science - paragraph two scaffold*

The topic sentence provided in the exemplar was:

> The organelles of the acinar cells and Islets of Langerhans cells are structured differently because the cells perform different functions.

Some of the students followed this sentence pattern in their responses:

> Tom: The differences between these two cells are that nerve cells have got parts like mitochondria, Golgi apparatus, Endoplasmic recticulum and Nissl bodies but the muscle cell does not because of its lack of need for these parts being a very simple cell it does not require many organelles but it does need a nucleus, both the muscle and nerve cell have a nucleus.

Whilst Tom has referred to both cells in his topic sentence, the topic sentence is too long and includes specific detail that would be best-placed later in the paragraph to elaborate upon similarities and differences. Liam provided a more concise comparison in his topic sentence:

> There are not many similarities between the red blood cells and the white blood cells.

In his next sentence, Liam elaborated by explaining why differences existed between cells, signified through the use of the conjunction "whereas":

> This is because after the first two days the red blood cells mature and use nearly all their organelles, whereas the white blood cells keep all their organelles once they mature.

Simone also tried to replicate the exemplar in her topic sentence:

> The difference between the two cells is that they are located in different parts of the body and do completely different jobs.

The use of the word "job" rather than a more specialised word such as "function" indicates the conundrum students discussed of trying to put text into their own words, when often there wasn't a suitable substitute. Isabelle was the only student to demonstrate her understanding of the word *organelles,* evident in the orientation of her paragraph:

> With important cells there must be important building blocks to create each cell. These building blocks are called organelles, every cell has them.

During the teaching of the exemplar, I demonstrated to students how they could use clause structures to signify their understanding of terms. For example, Simone could

have demonstrated her understanding of the word "organelles" by expanding the first sentence to include:

> With important cells there must be important building blocks, which are called organelles, to create each cell.

Expansion of clauses is important in developing students' control over the experiential function of language, where language structures are used to present information. This only comes through repeated demonstrations, examples, and practice, and two lessons were not enough to expect students to develop some competency in expanding clauses to demonstrate their content knowledge. Despite having an exemplar to refer to, it is clear that students would benefit from further instruction and opportunities to develop their paragraph writing.

The third body paragraph required the greatest amount of detail, which was evident in the scaffold in Table 6.5:

Paragraph Three <u>Cell function and the organism</u>	Select ONE cell from your report and explain the cell's function in the organism	
	Why is this cell important for the organism?	
	Could the organism survive without this cell type?	
	Identify problems that can have an effect on the function of the cell.	
	What are the consequences for the organism?	
	Identify treatments being used to address these problems.	
<u>Conclusion</u>	Summarise the structure and function of each cell	
	Link the cell function to disease and treatments	

Table 6.5: *Science Paragraph Three scaffold*

Isabelle's response demonstrates how she used the scaffold to answer each point, then combined the points to create a paragraph. Isabelle used the scaffold to note the following information (Table 6.6):

Paragraph Three Cell function and the organism	Select ONE cell from your report and explain the cell's function in the organism	Muscles control the whole body; they perform many tasks from everyday tasks to more complicated ones. Muscles help us keep a good posture as well as maintaining the continuous beating of the heart.
	Why is this cell important for the organism?	Without muscles a body would not function as no blood would be pumped to the brain, animals would be unable to feed, lungs would be unable to inflate, food would not be carried throughout the body causing the animal to die.
	Could the organism survive without this cell type?	Muscles are needed for everything so when they stop working then it has disastrous effects on the body.
	Identify problems that can have an effect on the function of the cell.	One disorder that affects many people is Muscular Dystrophy.
	What are the consequences for the organism?	Weakness of muscle and loss of muscle tissue.
	Identify treatments being used to address these problems.	Physical therapy helps patients maintain function and muscle strength. Orthopaedic

		appliances such as wheelchairs and braces can improve self-care and mobility abilities. In some cases, sine or leg surgery may help improve function. A person bearing the disease should be as active as possible.

Table 6.6: *Science Report Scaffold Paragraph Three – Isabelle*

Isabelle has generally included proper sentences rather than notes in the scaffold, and copied these directly to form a paragraph. When explaining the causes and consequences of muscular dystrophy, Isabelle has expanded upon the notes she had included in the scaffold to elaborate on the consequences of problems for people, as is evident in Table 6.7, in the final section of the paragraph:

Muscles control the whole body; they perform many tasks from everyday tasks to more complicated ones. Muscles help us keep a good posture as well as maintaining the continuous beating of the heart. Without muscles a body would not function as no blood would be pumped to the brain, animals would be unable to feed, lungs would be unable to inflate, food would not be carried throughout the body causing the animal to die. Muscles are needed for everything so when they stop working then it has disastrous effects on the body. One disorder that affects many people is Muscular Dystrophy. An inherited disorder that involves weakness of muscle and loss of muscle tissue, which gets worse over time There are no cures known for the many muscular dystrophies. The goal of doctors is to purely control symptoms. Physical therapy helps patients maintain function and muscle strength. Orthopaedic appliances such as wheelchairs and braces can improve self-care and mobility abilities. In some cases, spine or leg surgery may help improve function. A person bearing the disease should be as active as possible. Complete inactivity (such as bed rest) can worsen the disease.

Table 6.7: *Science Report Paragraph Three – Isabelle*

As already outlined in the section 6.1.2 Task Design, the third body paragraph, demonstrating students' understanding of *Science as a Human Endeavour*, proved to be challenging for students, as they did not have a lot of exposure to this content area in the classroom. Students had to be able to apply their knowledge of cell structures to research and evaluate what happened when alterations were made to cell structures in organisms. Students had to explore the consequences for the organism, as well as possible treatments. Because Isabelle had assiduously filled out her research scaffold, she ensured that she had responded to each of the key questions regarding alteration to cell structures and the impact on individual organisms. However, in Simone's response, she performed poorly in the Science as a Human Endeavour criteria, because her paragraph lacked elaboration and supporting evidence. Her third paragraph was as follows (Table 6.8):

White blood cells are important to the organism because it protects it from any disease that can occur for example leukaemia. Leukaemia is when you have an insufficient white blood cells count. If you had a low white blood cell count that would mean you could get seriously ill frequently. Treatments are available such as white blood cell injections and chemotherapy etc

Table 6.8: *Science Report paragraph three - Simone*

By directing her statements towards the reader through the use of "you", Simone's report lacks the distance and objectivity required in a Science report. She also inappropriately uses the abbreviation "etc", demonstrating that she has not understood the conventions of the report genre and that information should be explicitly stated, and not assumed. In terms of content, Simone needed to elaborate, outlining the types of "serious illness" that can result from a low white blood cell count, as well as expand upon treatments available. She would have benefitted from explicit instruction in how to complete the scaffold, and how use it to construct paragraphs. Overall, the greatest benefit would have been more time.

6.1.6 Textual Function of Language – Theme at the Clause Level.

Another aspect of the textual function of language that was explicitly taught during the two lessons allocated to writing in Science was theme at the clause level,

where “theme can be described as the ‘starting point’ for a text, paragraph or clause” (Humphrey & Droga, 2003, p 89). Theme functions across all parts of a text, “and plays an important role in orienting readers (and listeners) to how the topic is being developed” (Humphrey and Droga, 2003, p 89). The focus in the Science classroom was on theme at the clause level, as knowledge of theme patterns can assist in the organisation of cohesive texts. Within specific genres, theme choices “are quite different and contribute to the overall sense of what each text is about” (Humphrey & Droga, 2003, p 91). During this unit, the aim was to introduce students to the language feature of theme so they could become more aware of the patterns they were creating in orienting readers to the information included in their texts. However, as there were only two lessons allocated to the teaching of the report genre, there was no time for application and reinforcement of theme in supporting class activities.

The pattern of themes in students’ responses demonstrates they could benefit from further explicit teaching of theme at the clause level, particularly the use of dependent clauses to enhance meaning. Most students’ responses demonstrated a pattern of starting a clause with a noun or pronoun, which can be a common feature in the report genre where aspects of a particular thing or concept are described and explored. The theme can be identified as the beginning of the sentence up to the first process or verb. The part of the sentence that follows after the process or verb is where new information is presented, and is called rheme. In Bridget’s report, she previewed her focus on root hair cells and guard cells in the introductory paragraph when she outlined the topic of her report:

> Two specialised plant cells are root hair cells and guard cells or stomata.

The theme patterns in Bridget’s first body paragraph demonstrates a pattern of nouns and noun groups in theme positions:

Theme:

Root hair cells

The cells also

Root hair cells

The cells

Root hairs

Guard cells

Guard cells

Guard cells

Stomata

In her first body paragraph, Bridget focused on each of the two cells in turn – firstly root hair cells, and then guard cells. Noah also oriented readers to the two cells under investigation in his report in his introductory paragraph:

> Animals have many types of cells in their body but the two most important cells are white and red blood cells.

Noah's response demonstrates the same pattern of nouns and noun groups in theme position, focusing on each cell in turn:

Theme:

White blood cells

They

Red blood cells,

It

This type of patterning of themes across a text contributes to their "predictability" (Humphrey & Droga, 2003, p. 97). However, as highlighted in Christie's and Derewianka's *Developmental Trajectory of Writing*, Table 3.1 (2008), an important element in students' writing progression during mid-adolescence is greater use of dependent clauses in Theme position, a common feature in academic texts. In students' writing there was little evidence of use of dependent clauses in Theme position, and it is an area of potential future development.

Mack's response demonstrated a greater variety of nouns and more complex noun groups in the theme position:

Theme

The white blood cell

These cells

The nucleus

The difference between a smooth ER and a rough ER

The white blood cell

The red blood cell

Its cytoplasm

Its biomolecules

It

The main differences between the WBC and RBC

As stated in the last paragraph the RBC

Both the WBC and RBC

This

The WBC

The red blood cell

It

The more complex noun groups are evident in the themes concerning difference:

The difference between a smooth ER and a rough ER

The main difference between the WBC and RBC

In these sentences, Mack is orienting readers towards the differences between cells, hence he is using language to demonstrate his ability to compare and contrast the features of different cells. The use of a dependent clause is evident in the theme:

As stated in the last paragraph, the RBC

In this instance, Mack is linking to information in a previous paragraph, adding to cohesion in the text. The variety of nouns in theme positions highlights another theme pattern Mack has used to enhance meaning. This occurs when the rheme of a sentence, where new information is introduced, becomes the theme of the next sentence, thus adding to cohesion, as is demonstrated in Table 6.9:

Theme	**Rheme**
These cells	contain a smooth and rough endoplasmic reticulum (ER), Golgi apparatus, lysosomes, peroxisomes, ribosomes, centrosomes, mitochondria, plastids and nucleus.
The nucleus	is located in the middle of the cell

Table 6.9: *Use of theme/rheme - Mack*

The nucleus, the last item in the rheme of the first sentence, becomes the theme of the next sentence, in a type of zig-zag patterning (Humphrey and Droga, 2003). This pattern was replicated in another pair of sentences in Mack's response (Table 6.10):

Theme	Rheme
It's cytoplasm	is rich in haemoglobin which contains biomolecules that can bind oxygen.
The biomolecules	are the cause for the cell's red colour.

Table 6.10: *Theme/rheme pattern - Mack*

The function of the biomolecules, referred to in the rheme of the first sentence, is further elaborated upon in the second sentence by placing *biomolecules* in the theme position, and adding new information about their function. The effect of using zig-zag patterning to enhance cohesion was explicitly taught to students during the two lessons, as sections of the exemplar were constructed to emphasise this pattern. One example from the exemplar is evident in Table 6.11:

Theme	Rheme
Islets of Langerhans cells	are vital to the pancreas and the body as they produce insulin, which helps regulate the level of sugar in the blood.
This blood sugar – or glucose	rises after a meal, and the pancreas responds by releasing insulin, which aids in the absorption of glucose so that it can be converted in energy.
Without the production of insulin, Diabetes	develops, as glucose builds up in the blood instead of being absorbed.

Table 6.11: *Theme/rheme patterning – exemplar*

In the exemplar, in the first sentence the *Islets of Langerhans cells* is in the theme position, and the rheme presents information that these cells produce insulin, which regulates blood sugar levels. In the next sentence, readers are oriented to *blood sugar* in the theme position, with the role of insulin in regulating blood sugar being placed in the rheme position. The production of insulin then becomes the theme of the next sentence. The final sentence also shows a marked theme or dependent clause in the theme position, adding greater variety to sentence structure. As there was not a strong evidence of this zig-zag patterning across the whole group, it cannot be determined that Mack's use of this patterning was the result of explicit teaching. Mack's patterning of themes in the clause groups, through the use of a variety of nouns, and more complex noun groups demonstrates he has a broader repertoire of language skills to not only improve cohesion, but to also analyse and evaluate information.

One aspect of Mack's writing that does not comply with the conventions of the genre is extensive use of abbreviations in the paragraph, which at times distracts from the meaning of the text. Even though it might seem quite repetitive to write *red blood cells* or *white blood cells*, it is a common feature of reports where aspects of a concept or thing are being described or explained. It is not common usage in Science reports to reduce a term such as *red blood cells* to an abbreviation *RBC*. Mack would benefit from explicit knowledge concerning the appropriateness of using abbreviations in this genre of writing.

6.1.7 Experiential Function of Language – Use of Clauses to Expand Meaning

During the two lessons focused on explicit teaching of writing in Science, a brief discussion was conducted concerning the use of clauses to expand meaning. By mid-adolescence, students' work should demonstrate evidence of a range of clauses, equal and unequal in length and in different combinations, depending on the genre and field of study (Christie & Derewianka, 2008). The study did not present an opportunity to ascertain whether patterns in clause structures in students' Science reports was the result of explicit teaching. Tom's writing demonstrates he would benefit from explicit focus on clause structure and appropriate use of punctuation, as he has demonstrated a tendency to combine a number of clauses in a single sentence:

> The differences between these two cells are that the nerve cells have got parts like mitochondria, Golgi apparatus, Endoplasmic reticulum and nissl bodies but the muscle cell does not because of its lack of need for these parts, being a very simple cell it does not require many organelles but it does need a nucleus, both the muscle cell and nerve cell have a nucleus.

The sentence above was the topic sentence for the second body paragraph. Tom begins by focusing on "*the differences between these two cells*" where it is not initially clear which two cells he is referring to. Tom also includes information relating to specific differences between the cells such as mitochondria and Golgi apparatus, where this detail would be more appropriate in the body of the paragraph. Punctuation could be used more effectively to separate the clauses. Simone could also benefit from explicit teaching of clause structure and use of punctuation, as her work at times also demonstrates lack of control over these features:

> In Conclusion white blood cells is the bodies protective system as you can see from the research above it helps with many things like keeping away from infection, etc.

Simone's common use of abbreviations throughout her report is also evident in this sentence, as well as use of second person with "you". In order to progress in her writing in the discipline, Simone would benefit from explicit teaching of how she could write more objectively in third person, as well as to avoid abbreviations.

6.1.8 Science - Metalanguage

All students interviewed referred to the importance of learning to use language in specific ways in specific subjects to be successful in their learning. In both the group and individual interviews, all students referred to the use of metalanguage in subjects as being an important variant between subjects, although one student wrote the term "medal" language in her reflective response. One of the students, Isaac, provided a definition of metalanguage during the group interview: "Metalanguage is the language specified for each subject. " Tom stated: "there are a lot of big and hard-to-use words in Science," with Noah referring to the use of scientific language as an important subject literacy. The understanding that more technical, highly specialised language in Science was required in written assessment, rather than everyday language, was evident in Isabelle's example of explaining how in a scientific report you would use the word "appendix instead of tummy."

Although students recognised that use of scientific language was important in their scientific reports, they sometimes found it difficult to replicate in their written responses. Isaac critiqued his own report, saying:

> It's not very scientific, I would say. I haven't got the most scientific language in it. The metalanguage…um…yep…that's probably about it.

While Isaac can identify the language in his reports is not scientific, his response demonstrates he struggles to use more technical and specialised language. There is some evidence in Isaac's response of usage of more everyday language, such as the first sentence of his concluding paragraph:

> At the end of the line, red blood cells are absolutely vital to animals…

The expression "at the end of the line" is more suited to spoken expression, and the intensification of the word "vital" with "absolutely" is something that should be done selectively, as modal adverbs do not have a strong place in science reports (Christie and Derewianka, 2008). In his report, Isaac also states that haemoglobin is an "excellent way" to transport blood. As identified by Christie and Derewianka (2008), by mid-adolescence and certainly by their senior studies, students should be more judicious in the use of evaluative language in Science, as they are required to maintain an objective stance in their commentary on the features of things and concepts. A number of students used second person references in their reports, as has already been identified in Simone's response. This was also evident in Lisa's response:

> You have roughly 1.6 trillion skin cells…

As part of their apprenticeship in Science, this highlights students could benefit from explicit teaching of how they could become more objective in their writing using third person references. Use of scientific language provides a challenge for students but it is something they must develop control over if they are to master the academic language of Science.

6.1.9 Report Content

The variability in the detail of students' responses highlights the challenge some students faced in finding appropriate information. For three of the students, they stated they experienced difficulty because of the specific cells they chose, implying there was less information on some cells than some others. Simone said

her greatest challenge was in meeting "the word limit thing", as well as finding information:

> I think it's because of the particular cell I chose…skin cells.

Connor said he was not happy with his result and stated he could have researched "a bit more":

> I don't think there was enough information on the kidney…well, my cells specifically: the kidney cell, red blood cells.

Both Simone's and Connor's responses signify they have taken responsibility for the difficulties experienced in locating information, suggesting this resulted from the wrong choice of cell, rather than the fact that there might not have been appropriate information at a level they could understand. For Isaac, the most challenging was:

> probably finding the information and probably putting it into your own words, which is hard, 'cos of the way they worded it on websites I got it off were…pretty much the best way to put it. So you had to think of other ways that didn't sound too stupid, but still like got across without copying them.

Issac highlights the difficulties students in Year 8 experience when researching and trying to avoid plagiarising, and signifies they would benefit from further instruction in note-taking and varying sentence structure. Isabelle also found some websites challenging, saying:

> Some of them were really like hard to understand. I didn't know what words meant and stuff.

Isabelle's response highlights while the internet provides students with access to a range of sites and information, researching can be a struggle and frustration if data is too technical. During the study students were given two school lessons to conduct their research. Much of this was spent trying to locate information at an appropriate level they could understand, as searches would often provide links to highly technical research papers in journals. During the lesson observations I also noticed students would go to Google Images for diagrams of the organelles of specific cells, without linking to written text that explained the diagrams. Whilst students understood the importance of referencing, they also found it difficult to paraphrase information, particularly when it contained a high degree of technical and specialised language.

6.1.10 Section Summary

Students' responses to the Science assessment task about cells highlights that there can be greater emphasis on explicit teaching of writing in the classroom to assist students in constructing their responses. The task was complex and demanding, and while there was a detailed scaffold provided, students required an exemplar to enable them to conceptualise what the final product – a scientific report – looked like. Aspects of the task such as the criterion *Knowledge of Science as a Human Endeavour* proved difficult for some students to demonstrate an understanding of, as there was too much content detail in the unit outline to be able to cover this criterion adequately in class. Students also found it difficult to access information, depending on their chosen cells, because internet searches could lead to highly technical and academic texts. With only two lessons within the unit devoted to the explicit teaching of writing, emphasis was on the textual function of language, particularly student construction of texts at the paragraph level. Whilst students demonstrated an understanding that Science has its own technical language, some found this challenging, particularly when researching, as they encountered many words they did not understand. Analysis of students' texts highlights there should be greater emphasis on and more time devoted to explicit teaching of writing in Science, as two lessons of writing within a unit has limited impact on students' responses.

6.2 The History Domain

While the unit outline for the *Shogunate of Japan* unit was comprehensive, detailing what was to occur in each lesson, there was no specific reference to the Australian Curriculum General Capability of Literacy or writing. The unit materials, adapted from the C2C unit on the *Shogunate of Japan*, provided a range of activities exploring both primary and secondary documents concerning the cultural, economic and political life of feudal Japan. However, teachers had to be extremely discerning in terms of the selection of class activities, as there were far too many resources for the time allowed. Even though two weeks - four lessons - had been allocated to the study of the content of the unit, in reality, the teacher said she only had two-and-a-half lessons in which to teach the content. The emphasis in the unit was on the historical inquiry process: researching; note-taking and summarising skills; and drafting and production of the scroll. There was no opportunity to

introduce students to a range of shoguns in the context of time and place. Instead, by their third lesson, students had to randomly choose the name of a shogun from the list provided on the task sheet and trust that their chosen figure had historical significance during the shogunate era.

6.2.1 History - Task Design

All students could understand the purpose of creating a scroll, although not all students agreed it was a necessary way to impart information. Bridget, Isabelle and Noah said they enjoyed completing the task, while Simone said she was "proud" of her scroll, particularly as she had lost her USB and had to start again. For Bridget, creating a scroll was more engaging:

> Well, it's a bit more interesting…

Isabelle appreciated being able to do something more practical:

> It's good to get hands-on, I think.

Isabelle said making a scroll gave her insights into the Japanese way of life:

> You actually have to understand their culture and stuff.

For Noah, it was also an appropriate way to reflect Japanese culture:

> It's more in a Japanese cultural way in a scroll and all the setting out and stuff was different as well as we had to set it out from right to left, as the Japanese did their scrolls, and authenticate it.

Connor could also identify the purpose in creating a scroll:

> Just to experience it, I guess or respect the culture a bit more.

However, Connor also said "I personally thought it was a waste of time", a belief he shared with Isaac that was reinforced during the group interview:

> Connor: It's telling the teacher how much you've learnt this year and creating a scroll isn't really anything we've done.
>
> Isaac: That belongs in Art.

Isaac said the focus should be on content, "not on how well you can create a scroll", believing that a great deal of time was "wasted" just to improve presentation. Although Connor and Isaac could understand why they were asked to create a scroll, they implied it added unnecessary complexity to the task, where the main focus should have been on content rather than presentation.

The view that presenting information as a scroll was not a necessary or appropriate way to represent information in History alludes to a broader concern that a key genre was not identified on the task sheet. Connor's and Isaac's negative responses towards the task of producing a scroll highlights how the key genre of the discipline may be lost in task design. Just like in Science, where some students didn't know the final product they had created was a report, in History, the students first and foremost, saw the task as creating a scroll. Scrolls are not a key genre in History; in this assignment, the scroll is a text type used to represent information concerning key historical figures. While students are being apprenticed into a key process in History – historical inquiry – and asked to represent their information in a key historical genre – a historical report - the task sheet emphasised the text type, with no mention being made of genre. Students had no idea they were writing a report, presenting it in the format of a scroll; instead, they carried a belief that they were producing a scroll that was a feature of feudal Japan, not of any other culture. Therefore, without the emphasis on the writing of a report rather than a scroll, the danger comes in their subsequent years of History study: if students were asked to conduct a historical inquiry and produce a report, they would not necessarily link to prior learning in the Year 8 Shogunate of Japan unit. Connor's and Isaac's views that the production of a scroll was "a waste of time" perhaps reflects that during the unit, there was too much emphasis on the production of a scroll, rather than the historical inquiry process and the content students were expected to produce.

6.2.2 History – Use of the C2C Modelled Response

During the drafting process, it became clear that students could both structure their power point slides and use language more effectively to represent and evaluate the significance of their chosen shogun. A common area for improvement identified in students' drafts was the structure of topic sentences, particularly linking the topic sentence to the focus question being asked. This is when I decided to write example paragraphs about the indigenous figure Jandamarra, as the C2C-generated exemplar did not explicitly link topic sentences to focus questions. The following table (Table 6.12) shows the title of each slide the C2C modelled response, as well as the topic sentence for each slide.

Slide - Title	Slide – Topic sentence
1. Title slide: Emperor Meiji - What was the significance of Japanese Emperor Meiji (1852 – 1912)?	
2. Mutsuhito is born into the imperial family	Mutsuhito, the Emperor of Japan, was born 3 November 1852 to a concubine of Emperor Komei.
3. Mutsuhito grow up influenced by Shinto beliefs and values	The Shinto mythology of the Japanese imperial family influenced Mutsuhito's perceptions of himself and his role. Legend says that all Emperors are descendants of the legendary first emperor, Jimmu, said to be descended from Amaterasu, the sun goddess. This divine ancestry made the emperor Shinto high priest.
4. Shishi	Throughout Mutsuhito's boyhood large numbers of political activists from the samurai class, known as *shishi* (men of high purpose) began to speak against the shogunate.
5. The boy emperor	As Mutsuhito was only 14 when he became emperor, the *shishi* ignored him, continuing to work actively against the shogunate, and using Mutsuhito's name for their own purposes. In 1867 the shogunate system was overthrown and Mutsuhito was installed as the head of a new Japanese form of government. Although young when this photograph was taken, Mutsuhito ruled Japan until 1912, becoming the symbol and leader of the Meiji Restoration.
6. Meiji	In 1868, Mutsuhito announced the new era of

	Japanese history, called Meiji (enlightened rule).
7. Shinto under Meiji	The new Meiji government under the Emperor was determined to increase the importance of Shinto and separate it from Buddhism.
8. Western ideas	Under Emperor Meiji, one significant departure from mainstream shogunate thinking was the uptake of western ideas, education, technology and fashion.
9. Emperor's influence	Although the emperor did not gain real political power in Japan under the Meiji Restoration, controlled as it was by the daimyo and samurai who ushered it in, he was a significant individual in the downfall of the Tokugawa Shogunate.
10. Bibliography	

Table 6.12: *History – C2C modelled response*

In the task, students were required to "*explain the significance of an individual, incorporating key influences on his/her life, and major impact he/she has had on wider society"*. The significance of Emperor Meiji is foregrounded in the question on the title slide. The third slide - *Mutsuhito grows up influenced by Shinto beliefs and values* – incorporates a key influence in the life of Emperor Meiji. It is not clear from the titles of subsequent slides and their topic sentences whether there are other key influences on the Emperor's life. Influences are implied rather than explicitly stated, and for students who struggle with writing, explicit signposting of information such as "another key influence" assists them in comprehending how information is structured in a report. The word "*impact"*, referred to on the task sheet, is not explicitly referred to in the titles of the slides, nor the topic sentences; in fact, *impact* is not used on any of the slides. Again, references to the impact of the emperor are implicit, and rely on students' vocabulary and comprehension skills to be able to identify how information about the impacts of the Emperor's rule is represented. When constructing an exemplar, particularly for junior students beginning their apprenticeships in the disciplines, consideration needs to be given to explicit

statements, use of connectives and topic sentences that clearly link to questions being asked on the task sheet.

The modelled response, with its implied references to the task, would prove difficult reading for students who struggle to comprehend beyond a literal level of meaning. There was also great variation in the depth and breadth of information included on some of the slides. For example, the following information in Table 6.13 was included in slide 3:

3. Mutsuhito grow up influenced by Shinto beliefs and values	The Shinto mythology of the Japanese imperial family influenced Mutsuhito's perceptions of himself and his role. Legend says that all Emperors are descendants of the legendary first emperor, Jimmu, said to be descended from Amaterasu, the sun goddess. This divine ancestry made the emperor Shinto high priest.

Table 6.13: *History C2C modelled response slide 3*

The sentences were not part of a cohesive paragraph, but were written on separate lines. It is not clear from the information provided what Shintoism is, how it influenced the Emperor, and why he chose this over other belief systems. A statement that "the Shinto mythology…influenced Mutsuhito's perceptions of himself" is included, but supporting evidence is not presented. In the criterion of *analysing and interpreting* included on the criteria sheet, to achieve an A standard students are required to "*effectively analyse, select and organise relevant information from sources to use as evidence to answer inquiry questions in a picture scroll and record of research*". Slide 3 does not contain appropriate evidence to justify the statement that the Emperor was influenced by Shintoism. Slide 8 provides another example of lack of appropriate supporting evidence (Table 6.14):

8. Western ideas	Under Emperor Meiji, one significant departure from mainstream shogunate thinking was the uptake of western ideas, education, technology and fashion. Whilst the adoption of Western ideas caused conflict, the Emperor, intent on catching up, wholeheartedly

	embraced the West. Although he often wore Western clothing, Emperor worship became a central point of Japanese ideas.

Table 6.14: *History C2C modelled response slide 8*

The topic sentence signifies four aspects of a western lifestyle that influenced the Emperor: ideas, education, technology and fashion. However, only one of these features – fashion – is referred to in the three-sentence paragraph. This highlights that it would be difficult to teach students appropriate paragraph structure using this modelled response. On the whole, I found the response quite disjointed, and lacking detail and cohesion. Although the C2C exemplar provided students with an idea of layout, it was not the most effective example of how to use language and structural features to represent the significance of an individual's life.

6.2.3 History – Example Paragraphs

With one lesson in the unit devoted specifically to the teaching of writing, it was decided the salient language and structural features to be taught would be paragraph structure, including topic sentences, using clauses to expand information, and theme and rheme. In writing the exemplar, I used two focus questions, replicating two of the questions most students used to frame their inquiries:

* Who was Jandamarra?

* What key influences or circumstances shaped Jandamarra?

The introductory paragraph, focusing on who Jandamarra was, was broken into clauses and phrases to highlight how these structures could be used to expand information. In the teaching of these, we looked briefly at main and subordinate clauses, endeavouring to show how phrases and subordinate clauses could be left out and sentences would still make sense, but be lacking in detail.

6.2.4 History – Students' Use of Exemplars

When asked what helped them to organise their information in History, again, most students referred to the exemplar, as well as the focus questions they were required to construct. Bridget said:

> Ah, well, the example helped me…and also the questions.

For Simone, the research questions were important as "they helped me find the information that I wanted." Noah said that "all the setting out and stuff, and examples we'd been doing in class" assisted him. The lesson where I focused on the example paragraphs about Jandamarra occurred after the drafts were due, and both Noah and Connor said they added in more details to their responses after this lesson. Noah said after the lesson, he "added in even more information from the notes". Connor said the example paragraphs helped him to realise he needed another focus question, otherwise he would not have had enough information. Both Connor and Noah used the exemplar to provide them with an idea of the amount of detail required in the paragraphs, rather than structural and language features. For most students, the layout and presentation of their power point slides in the format of a scroll was not a challenge, as they had the C2C-generated example to refer to. Isaac's response highlights how students also refer to and ask questions of their peers if they need guidance when completing their assignments:

> Um, well, it was actually talking to friends really…had a look at theirs in class to see how they structure and yeah, just looked at the slides because some people had their pictures here (pointing to his scroll) then words and image attribution.

As occurred in Science, Lisa was the only student who said she didn't use the example paragraphs. For their history responses, students used the C2C-generated response to provide them with an idea of the layout of the emakimono, and used the example paragraphs about the Indigenous figure Jandamarra to provide guidance as to the depth of detail required.

One interesting aspect of students' responses in History highlighted how students felt comfortable changing the format of their emakimono when compared to the C2C-generated exemplar. On the exemplar, the layout of each slide included a title, written text underneath the title, and then a visual underneath the written text, or to the right of the slide. For Isaac, the main change he made to his draft was:

> the actual format of the power point. Like I had a picture here (points to his scroll) but I thought it'd just look different if I put all the pictures down the bottom left – I mean – bottom right. And the next to that the attribution and then the actual information above it.

Connor placed his pictures and text on separate slides, because "the pictures wouldn't be big enough if I put them on the same slide as all the text". Isabelle, however, did not think of altering the format to suit the content, but instead, cut the content to fit the size of the PowerPoint slide:

> Well, I learnt as much as you like want to put lots of information and stuff, you can't put too much on it because it won't, like, fit the slides (points to her scroll). And you have to like make it small; you have to like put enough information but not too much.

For Isabelle, the size of the slide was helping to teach her the importance of selection of information, rather than deliberate class activities focused on note taking and summarising:

> 'Cos I remember this one (points to slide) had like…this one was really, really big but then I had to choose like what information I didn't really need. Like, information that didn't really apply that much, so that it was interesting because I put it onto the power point because it was like really, really big so I had to get rid of stuff.

Isabelle did not think to make the same decision as Mack, who had two slides of information on each of his key questions. Whilst students like Mack, Connor and Isaac could make choices to adjust the format to suit the purpose of the task, other students like Isabelle viewed the format as rigid and adjusted their content accordingly.

6.2.5 History – The Drafting Process

The lesson focused on the explicit teaching of language features of the example paragraphs about the historical figure Jandamarra occurred after the students handed in their drafts. In a majority of student responses, it was clear that this lesson and the example paragraphs influenced them to make changes to their written texts. As already mentioned, Noah and Connor said they made changes to their drafts after this lesson. For Connor's response, it is evident he improved not only the topic sentences of his slides, but in some cases, he added further information as well. In the example paragraphs about Jandamarra it was emphasised to students that in the introductory slide responding to the question "*Who was Jandamarra?*" there should be some indication of his historical significance.

Slide 1 – Draft	**Early Years** Toyotomi Hideyoshi was born February 2nd 1536 at the Owari Province where the Oda Clan lived, he had a fairly unknown starting life; he was decendant from an untraceable samurai lineage and was born of a foot soldier named Yaemon.
Slide 1 – Final Copy	**Starting Life** Toyotomi Hideyoshi was a powerful general that helped Japan in many ways. He was born February 2nd 1536 at the Owari Province where the Oda Clan lived, he had a fairly unknown starting life; he was decendant from an untraceable samurai lineage and was born of a foot soldier named Yaemon.

Table 6.15: *History - slide 1 draft and final copies (Connor)*

In Connor's draft, his opening statement provided details of when his chosen shogun was born, as well as the shogun's family background, evident in Table 6.15. Connor retained these details in the final copy, but oriented the reader to the shogun's historical significance by changing his topic sentence to include: "was a powerful general that helped shape Japan in many ways". One thing strongly emphasised to students during the teaching of the example paragraphs was that topic sentences should be linked to and answer the research questions. It was explained to students that when researching the significance of a person's life, there could be a tendency to take a chronological approach and explore their life from birth through to death. While chronological details are important in History, students were reminded that the purpose of the task was to evaluate the significance of a person, what shaped their lives, and what impact they had on the lives of others. Through use of example paragraphs, it was explained to students when constructing topic sentences, they should orient readers to focus questions rather than chronological details. This emphasis on focus questions is reflected in the changes Connor has made to his slide about the key influences on his chosen shogun's life (Table 6.16):

Slide 2 – Draft	**Elevated Status** As a young man he left to explore Japan and learned many skills and earned money. After returning to the Owari Province, Toyotomi rejoined the Oda clan and was led by Oda Nobununga as a servant at first but soon became a sandal-bearer and was present in the Battle of Okihazama. This elevated his status even more in Oda's eyes. Due to his new rank and the need for such a title, he supervised the reconstruction of Kyosu castle. He also built the

	Sunomata while in enemy territory in "one day" and found a secret route into Mount Inaba, making him a key person in the Battle of Okihazama.
Slide 2 – Final Copy	**<u>Influences</u>** Many things shaped Toyotomis life as a young man. When young, he left to explore Japan and learned many skills and earned money. After returning to the Owari Province, Toyotomi rejoined the Oda clan and was led by Oda Nobununga as a servant at first but soon became a sandal-bearer (overseer of the estates of a house) and was present in the Battle of Okihazama. This man's achievements are historically significant as they changed Japan greatly. From a young age he succeeded in becoming a sandal-barer and went into the Battle of Okihazama, making a fort as safe haven for soldiers and then proceeded to find a secret passage into Inabayama Castle. He played a significant role in the Japanese, Battle of Okihazama. However, he not only did this but united Japans political rulers. He changed the way of the economy and made people more productive. This is all historically significant as it changed Japan forever.

Table 6.16: *History - slide 2 draft and final copies (Connor)*

In the draft, the title is <u>Elevated Status</u> and the topic sentence focuses on chronological details concerning the shogun's life as a young man: "As a young man he left to explore Japan and learned many skills and earned money." In the final copy, Connor has oriented readers to the influences on the shogun's life through the use of the word "shaped": 'Many things shaped Toyotomis life as a young man.' Connor has also added in parentheses an explanation of what a sandal bearer was to demonstrate his knowledge of the subject matter. Connor then signifies a change in emphasis from influences to achievements with the sentence: "This man's achievements are historically significant as they changed Japan greatly." On the final copy the teacher made the notation that the information about achievements should be included on the *Achievements* slide. Connor then repeated information about the Shogun's position as a sandal "barer" and his role in the Battle of Okihazama. This was also remarked upon by the teacher in a notation on the final copy, as well as the fact that the statement "united Japans political rulers" was an achievement, not an influence. Connor would have benefitted from more careful editing of his work, evident in the punctuation and spelling mistakes on the slide. While he has endeavoured to add detail that answers the research question, it seems

he has become confused between what is an influence and what is an achievement. Although Connor has made changes to improve his work, further refinement would have improved his response. It should also be considered whether exposure to the sample paragraphs before the draft was due would have resulted in better drafts, with more extensive information, in the first place.

Connor's final slides (Table 6.17) also demonstrate how he made adaptations to improve the quality of his response. In his draft, while the topic sentence orients readers to the focus question concerning the shogun's achievements, Connor repeats information from his earlier slide regarding influences on the shogun's life.

Final Slide – Draft	**Historically Significant** This man's achievements are historically significant as they changed Japan greatly. From a young age he succeeded in becoming a sandle-bearer and went into the Battle of Okihazama making a fort as a safe haven for soldiers and then proceeded to find a secret passage into Mount Inaba.
Final Slides – Final Copy	**Legacy** After Toyotomis death, he was not forgotten, and he even left behind a legacy for future generations. He changed Japans society and way of living 300 years. He changed Japan for the better; it was common for peasants to become warriors, and samurai to farm, this would have been greatly beneficially for the economy, able warriors when needed and when not needed, skilled farmers. He also made Japanese citizens live and stay in official fiefs that they could only move from with the correct authorities permission.
Final Slides – Final Copy	**Historically Significant** This man's achievements are historically significant as they changed Japan greatly. From a young age he succeeded in becoming a sandle-bearer and went into the Battle of Okihazama making a fort as a safe haven for soldiers and then proceeded to find a secret passage into Mount Inaba. He played a significant role in the Japanese, Battle of Okihazama. However, he not only did this but also united Japans political rulers. He changed the way of the economy and made people more productive. This is all historically significant because it changed Japan for the better.

Table 6.17*: History – Final Slides (Connor)*

In the final copy Connor adds extra information to answer the research question: *What are Toyotomi's achievements* by including a slide called Legacy, where he

orients readers to the shogun's "legacy for future generations". Connor elaborated on this legacy in the next sentence, by including more specific information that the shogun "changed Japan's society and way of living for 300 years." He provided evidence of specific changes that were made by the shogun. There are lapses in punctuation and grammar that again highlights that more careful editing and further refinement of the response would have been beneficial.

Like Connor, Liam's final response (Table 6.18) also demonstrates how an improved understanding of language could be used in topic sentences to orient readers to specific focus questions. The changes that Liam has made to his final copy are often signified through expansion of a clause, such as in the first slide where Liam has added "the first shogun" to emphasise the historical significance of his chosen subject. Slide 2 of the draft shows an orientation to chronological details of the shogun's life; this has changed in the final copy to an emphasis on "The key influences and circumstances that shaped Minamoto no Yoritomo's life". In the draft of the fifth slide, Liam focuses on power but in the final copy he chooses to include more information by adding "*achieved many things"* as well as a continued focus on power. The final slide shows a change in emphasis in the topic sentence from "achieved many things" to a more considered use of evaluative language, where it is stated the shogun "had a significant impact on Japan in the 18th century and the world today". By adding in greater specificity to the topic sentence in the context of time – both past and present – Liam has signified his ability to analyse and evaluate key information in terms of time and change, a key literacy within the History domain.

Slide 1 – Draft	**Who was Minamoto no Yoritomo?** Minamoto no Yoritomo was born on 9 May 1147, the third eldest son of Minamotono Yoshitomo and Fujiwara no Suenori, in Hein (now known as Kyoto) which was the capital of Japan.
Slide 1 – Final Copy	**Who was Minamoto no Yoritomo?** Minamoto no Yoritomo, the first shogun, was born on 9 May 1147, the third eldest son of Minamotono Yoshitomo and Fujiwara no Suenori, in Hein (now known as Kyoto) which was the capital of Japan.
Slide 2 - Draft	**What key influences/circumstances shaped Minamoto no Yoritomo's life?**

	Minamoto no Yoritomo had a political career beginning at the early age of 12 due to his parents Minamot no Yoshitomo and the Fujiwara no Suenori lineage.
Slide 2 – Final Copy	**Influences that shaped Minamoto no Yoritomo's life** The key influences and circumstances that shaped Minamoto no Yoritomo's life was his political career beginning at the early age of 12 due to his parents Minamoto no Yoshitomo and the Fujiwara no Suenori lineage.
Slide 4 – Draft	**What power/authority did Minamoto no Yoritomo hold?** Minamoto no Yoritomo held great power throughout his life.
Slide 4 – Final Copy	**Minamoto no Yoritomo's Accomplishments** Minamoto no Yoritomo achieved many things and held great power throughout his life.
Slide 5 – Draft	**What did Minamoto no Yoritomo achieve/accomplish?** Minamoto no Yoritomo achieved many things throughout his life.
Slide 5 – Final Copy	**Minamoto no Yoritomo's Significance** Yoritomo's life had a significant impact on Japan in the 11th century and the world today.

Table 6.18: *History – Theme patterns in slides (Liam*)

Mack's response (Table 6.19) demonstrated how explicit teaching of writing in History can assist proficient writers in refining their responses. Mack had consistently demonstrated a High Achievement or above in his subjects prior to the research project. A comparison of the example paragraph about the influences on Jandamarra to Mack's power point slides answering the research questions "*What power did Sen no Rikyu have?"* demonstrates how Mack has used the example to guide his writing. The Jandamarra paragraph exemplified a pattern of paragraph theme where three significant influences on Jandamarra's life were stated in the topic sentence, then elaborated upon in turn within the paragraph. Two versions of the paragraph were given to students: Version 1 demonstrated organisation of the text through the use of rhetorical conjunctions such as *firstly, secondly* and *lastly*; whereas Version 2 showed how points could be introduced without rhetorical conjunctions. Version 1 of the paragraph is set out in Table 6.19:

The key influences that shaped Janadamarra were his time spent growing up on sheep stations and working for the police; the mistreatment suffered by the Indigenous at the hands of the authorities and pastoralists; and his initiation into Aboriginal culture and tribal law. Firstly, Jandamarra learnt many skills growing up on Lennard River station, including shearing, shooting and riding horses. He further developed these skills when he worked for the police as a tracker, as well as looking after their horses. Jandamarra was able to use his skills against police and pastoralists when he and other members of the Bunuba tribe began their war against white expansion into their country. Secondly, Jandamarra was also greatly influenced by the mistreatment he and others suffered at the hands of police, which led him to change his attitudes towards white people. Many Bunuba men were arrested for hunting cattle, because their usual food sources, including native fauna, had been driven out as pastoralists cleared the land. The Aboriginal men were shackled together in chains and marched long distances to Derby jail, where they were sent to labour camps or away on steamships, never to see their families again. The third factor influencing Jandamarra in his decision to mount an attack against whites was his initiation into tribal customs and laws, where he learnt the value of the land to his people. This made him angry when many sacred sites were destroyed by pastoralists after they established their settlements. Jandamarra was greatly influenced by his time spent working for white settlers and the police, the abuse inflicted upon Aboriginal people by white people, and tribal beliefs about the value of the land, all of which were significant factors in his decision to attack the whites in his effort to drive them out of Bunuba country.

Table 6.19 History – *example paragraph Jandamarra*

A comparison between the example paragraphs (Table 6.19) and Mack's response (Table 6.20) shows Mack has followed the Jandamarra example in the construction of his paragraph, spread over two slides. In the topic sentence, the evaluation that Sen no Rikyu had "*quite a lot*" of power demonstrates more informal use of language, and this is where explicit teaching of evaluative language in History could assist Mack. In the second sentence of the paragraph, Mack outlined three "circumstances" that led to an increase of power for the shogun, and then elaborated upon each of these in turn with the rhetorical conjunctions *Firstly*, *Secondly* and *Lastly.* In the concluding sentence of the paragraph, Mack links back to the topic

sentence by restating each of the main sources of power, using modality in the words *much* and *most* to signify his evaluation of the impact of each power source. In this example, although explicit teaching of language was focused mainly on the textual function of language, it can be seen that with Mack's use of evaluative language, he is developing an understanding of the interpersonal function of language in History.

Slide 4 What power did Sen no Rikyu have?	The power that Sen no Rikyu had was quite a lot for a man of his social status. He earned his power due to three main circumstances; His work with Oda Nobunga, leading Daimyo of Japan; becoming the advisor to Toyotomi Hideyoshi the following ruler; and being bestowed upon the religious title of Koji by the emperor. Firstly, at the age of 58 Sen no Rikyu was offered the opportunity to work for Oda Nobunga. At the time he was the most powerful figure in Japan. Sen no Rikyu hastily accepted the offer and quickly climbed the ranks of power. Unfortunately, shortly after his appointment, Oda Nobunga was assassinated.
Slide 5 What power did Sen no Rikyu have?	Secondly, as a result of Oda Nobunga's liking of Sen no Rikyu, the following Daimyo , Toyotomi Hideyoshi, appointed Sen no Rikyu as his advisor. This unofficially made Sen no Rikyu one of the most influential figures of the time. His rule with Hideyoshi lasted until he died . Lastly, the emperor of that time had no real power but religiously bestowed upon Sen no Rikyu the Buddhist title of Koji. This was an honorary title that gave him power in the world of tea ceremony. Following this establiishment he was known as Sen no Rikyu Koji. He earned much power in his life from two Daimyo's and a Buddhist title but he received the most power and control from his work with Toyotomi Hideyoshi.
Slide 6 What did Sen no Rikyu achieve?	Sen no Rikyu is a significant part of Japanese history because; he contemporized Japanese tea ceremony; rose from the bottom of the social ladder to being an advisor to the leading Daimyo; and died in a way even the Daimyo regretted. Sen no Rikyu's life was eventful and joyous as he changed the way Japanese people perceived tea ceremonies and went from being a merchant to being the leading Daimyo's, Toyotomi Hideyoshi, advisor. However, after his success he was dealt an awful death. His master Toyotomi Hideyoshi ordered Sen no Rikyu to commit seppuku, ritual suicide. Sen no Rikyu was very successful in his career and his social status. He was remembered for this as he gained success in many parts of life which most other people can't. That is why he is a significant part of Japanese history

Table 6.20: *History – Mack's response*

6.2.6 History – Metalanguage

Like Science, students also recognised that History has its own metalanguage. Students identified topic-specific words such as *serf* and *shogun* as being a feature of the metalanguage of History. Isabelle also considered the metalanguage of History as being "old language and names that are old and complex." Some of the students extended their understanding beyond topic-specific words, as identified by Noah: "History has its own technical language and writing with it." In terms of writing, both Isabelle and Bridget identified that past tense was a feature of writing in History. Isabelle explained how knowledge about writing in past tense influenced her paragraph construction in the emakimono task:

> You have to like, make your own things in past tense, like "The shogun is taking over", it had to be "The shogun took over". Like, you have to make yours in past tense.

Bridget indicated she learned about past tense through the drafting process:

> Well, I remember with drafts, sometimes I used more recent tenses and I had to change them to past tense…and you talk like about what like has happened, what they have done.

Use of subject-specific vocabulary is a key feature of classroom interactions, and it becomes a shared and assumed knowledge between teachers and students. In both Science and History, time was spent writing out terms and definitions, and students were expected to use these terns in both oral and written responses. It was assumed students would retain prior knowledge of terms, as was evident in a classroom exchange in History, where students were looking at a power point slide of the social hierarchy in Shogun Japan:

> Teacher: What are the differences to the Medieval pyramid?
> Student: More in the warrior class.
> Student: There isn't a lot to do with religion.
> Student: Looks like ninety per cent of the population are peasants.
> Student: The emperor doesn't do anything?

In this exchange, it is assumed students understand terms such as *pyramid, warriors* and *peasants*, which were introduced in an earlier unit. Correct usage and spelling of terms is also important for students to demonstrate their knowledge and understanding of the subject, evident in another exchange in the History classroom:

> Student: Is it okay if we spell names wrong? Cos', you know...

Teacher: I would expect you to spell names correctly.

Once a term is introduced, it cannot be assumed that students have understood and remembered its meaning. Two students spoke about the value of teachers "recapping" as they struggled to retain knowledge. James, who had teacher aide support in the classroom, said that what helped him was "Um, just continuously like…recapping on all the work…and stuff like that." Simone, who referred to herself as a "slow learner" taking a while to learn something, said recapping was valuable. When asked what teachers could do in the classroom to help students, she responded: "They could work together more, and maybe like describe things better, because some teachers are like, you should already know this." What Simone was referring to in teachers working "together more" was the joint construction process. Her response also highlights how some students do not retain knowledge readily and teachers should not assume that once encountered, knowledge is stored. Students like Simone and James need constant triggering of background knowledge before new knowledge can be retained. Simone referred to the posters on the wall in English as helping to jog her memory about the specific meaning of terms of evaluative language such as Affect, Judgement and Appreciation. Students learn about language through using it, in both oral and written responses, and may need reminders about previous knowledge learnt before new knowledge can be consolidated.

6.2.7 Section Summary

The History task, like the Science report, proved to be a challenging task for students, not least because there was the opportunity for only one lesson of explicit teaching of writing within the unit. The emphasis on the creation of an emakimono, a Japanese scroll, meant that like Science, some students did not perceive that they were developing skills in the construction of a key genre in History, a historical report. Again, like Science, there was too much content for the unit, and there were less than three lessons of exposure to new content before researching for the task began. The C2C-generated exemplar for the task did not provide adequate guidance for students in terms of how they were to construct paragraphs to answer research questions. Example paragraphs about the indigenous figure Jandamarra were deconstructed for students after their drafts were handed in, and there is evidence in

students' final copies that they had used these paragraphs to amend their final copies. As occurred in the explicit teaching of writing in Science, most of the emphasis of the lesson about writing was on the textual function of language, particularly paragraph construction. While students recognise that History has its own language, just like Science, they sometimes have difficulty drawing upon knowledge previously encountered, particularly when it has been assumed this knowledge had been retained. Units must be designed so that they not only allow students time to consolidate content knowledge, but develop their writing skills as well. The planned intervention in writing had a limited impact on student writing overall, with the greatest impact being seen in the work of an already proficient writer (Mack).

6.3 The English Domain

English staff were not constrained by having to adapt C2C units and assessment to fit the structure of the school timetable. The unit Indigenous Perspectives was developed by staff at the school the previous year in response to the Australian Curriculum for English guidelines (see previous chapter, Table 5.7).

6.3.1 English - Task Design

The assessment task for English was a literary response to a text to be completed under supervised conditions over two lessons. The assessment was designed to reflect a progression in students' writing, with students writing paragraph responses for their first term assessment in response to questions concerning a novel, building to an essay response in the final term of Year 8. Students were given practice tasks to prepare for assessment, reflected in Connor's comment "we did about I think two or three other texts as practices". Most students were able to demonstrate an understanding of what was required for a literary response, as demonstrated by Connor:

> Um, for *The Rabbits*, we had to do a sort of deeper…we had to tell the deeper meaning of the story, how they…how the author has used evaluative language like Affect, Judgement, Appreciation, um…they had to…kind of say what they used, where it was in the text and we had to add an image if there was one that corresponded to *it.*

Connor could identify that he was learning Appraisal Theory or evaluative language – Affect, Judgement and Appreciation – to help him to determine the "deeper meaning" of the narrative. Connor also felt knowledge of evaluative language made him more aware as a writer:

> I sort of thought that way before we even started doing this but I think a bit more than that way now we have done it.

He elaborated by stating he thought "it would be useful for persuading someone to a certain way a just giving it a deeper meaning of a text so that people will understand it better". Bridget agreed knowledge of Appraisal helped her with her writing and understanding of texts:

> Well, it helps us like feel the feeling I can tell about certain texts and things…

Isaac said knowledge of evaluative language made him more aware when choosing language. Even though students could understand the purpose of studying evaluative language, and how it made them more aware as writers, they struggled to demonstrate their learning in their responses to the assessment task.

A significant challenge for students in the design of the assessment task was the choice of text for students to analyse: *The Rabbits*, written by John Marsden and illustrated by Shaun Tan. From the unit outline in the previous chapter, it is evident the majority of texts students analysed and deconstructed in class were songs, and the exemplar written by teachers was about the poem "We Are Going" by Oodgeroo Noonucaal. The students began their textual analysis at the beginning of the unit by studying the picture book *Shake a Leg,* by Boori Pryor. They were also given an example response written by a student the previous year. While students studied aspects of visual language early in the unit, they did not review visual language again until they sat down to do their assessment. Even though students had been exposed to visual language in *Shake a Leg*, the images were quite literal in response to the words in the text, while there was a great deal of symbolism and metaphor in the images in *The Rabbits*, an allegory for white settlement in Australia.

Despite the scaffolding of the task students received over many weeks in class, including modelled and joint responses, as well as practice tests, students identified the choice of text as a flaw in the task design because they had not had enough exposure to that type of text. Bridget discussed how in the task "there's a lot

more visuals to write about" compared to the songs they had been analysing in class. Connor said while the practice tests helped:

> They were musical texts, like all music. I think there was one poem but the text we got was a book. We only practised like one book.

Isabelle agreed with Connor's observation concerning the incongruence between the texts used in practice responses and the text used in the exam:

> Um, I feel like we could have practised a bit more with not like songs 'cos we did a lot of songs.

Isabelle spoke further about the difficulty in analysing *The Rabbits*:

> It was quite hard because there wasn't very many words so you needed to choose a word then definitely reference it back to the pictures, otherwise it would be just like a couple of words that wouldn't really make sense.

The written text in the book is minimal, and must be interpreted within the context of the rich visual imagery surrounding the words. For example, on the page where it says *They brought new food, and they brought other animals,* the illustrator Shaun Tan has drawn a picture of a sheep with large teeth disproportionate to the rest of its body, to represent the destruction introduced animals have caused to the environment. Isaac said he accessed the book online, and studied the images "to see the little details that might be included". On one of the pages he noted:

> There was like a gear left behind…sort of like a cog wheel to represent them littering.

Bridget noticed there were flags repeated on pages in the book, which

> I kind of thought it was the theme, like…um…the rabbits, the white people, where, well…cause chaos and that kind of what was through the book.

Isaac's and Bridget's responses highlight the complexity and sophistication of the images in the text that required detailed study. Students only had one 70 minute lesson to study and write notes about the text, and then another 70 minutes to write their responses. Isaac was the only student to say he did some preparation in between the two lessons, held over consecutive days. *The Rabbits* represented a challenge for students when completing their assessment and they were not adequately prepared for visual analysis, particularly visual symbolism and metaphor, during the unit.

The task description was also very broad, and could have been restructured to give students a more specific focus concerning how they were to respond to the task. The task required students to write a "literary response", but there were no further directions as to what students should be writing about, how they should approach the task, and how to structure their responses:

> You are to analyse an excerpt from the picture book "The Rabbits" by John Marsden and Shaun Tan using the attached "Analysis of Text" sheet. You will then use these notes to write a literary response to the text. You will need to write in well-constructed paragraphs. You will need to include specific examples from the text to support your analysis.

While the task description requires students to write "well-constructed paragraphs", there is no indication that they are to write an essay. It is not outlined that students should analyse the author's and illustrator's use of evaluative language and visual imagery. Even though this detail is contained in the "Analysis of Text" sheet, it should be obviously stated to provide a clearer direction for students. There also could have been more specific detail concerning what students were to analyse; for example, how indigenous people were represented in the text. Although it might be assumed that students, through repeated practices in class, have implicitly understood the demands of the task, without greater specificity in the task design there is potential for inconsistency in student responses and teacher interpretation of what the task requires because the task description is too broad.

6.3.2 English Assessment – the Writing Process

Despite issues in the task design for English, a clear finding to emerge from the study was students' valuing of the writing process. It was evident during the study English was the subject where the students were afforded the greatest opportunity to develop their writing through modelled and guided responses, and opportunities to practise their writing independently. Connor identified the effectiveness of this process when asked what helped him prepare for his English assessment:

> Just practising in class with Ms King, giving examples and making us do a few ourselves, a few practice exams.

Bridget also valued the writing process, saying the practices "helped us understand how to write one and more about evaluative language". She highlighted the value of joint writing activities, particularly the opportunity to listen to the ideas of others and how they might respond to a text:

> 'Cos when we did some of them with the class we had like everyone's ideas and thoughts.

Isaac supported Connor's and Bridget's affirmation of shared writing experiences in class:

> Well, Ms King helped us do a lot of examples. Yeah, we did a lot of examples, like how to write it and um…what to put in and how to explain our examples.

With repeated practices, students felt better prepared for their English assessment than they did for their Science and History tasks.

One of the most significant effects of repeated writing practices in English was the increase in student confidence. Simone stated she felt more confident:

> because we did a lot more on it as a class.

Connor said his response was better due to practice and feedback:

> If I didn't do those practices and just sat at the table and got given *The Rabbits* and had to write a response, I probably wouldn't have got a mark anywhere near this. It could be fairly lower.

For James, the practices provided surety that he knew what was required of the task:

> It was actually a lot of help because I knew what I had to do for the next one, when the teacher marked it.

Isabelle revealed the anxiety students experience when they are exposed to a task they have not encountered previously:

> I guess we were all kind of like nervous because we hadn't really done an exam like that before. But I felt really good 'cos I had a lot of practice, like I had a lot of knowledge about the Stolen Generation and about the colonisation of Australia.

Isabelle's response highlights how Year 8 students are beginning their apprenticeships in a variety of subjects and that means completing a range of assessment that they may be exposed to for the first time in their schooling. Isabelle

felt confident going into the exam because of practice, which she felt had led to improvement in her writing:

> When I first tried stuff like this, my try was quite a fail but this time I've actually done something like… (does not complete the statement)

Isabelle felt pride in her completed response, but was disappointed in her result and expressed difficulty in finding appropriate examples of evaluative language in the text. This again reinforces that the chosen text did not allow students to effectively demonstrate their knowledge due to the complexity of the text and lack of exposure to that type of text.

6.3.3 English Assessment – Content

A significant outcome from the English assessment task was that students did not fully comprehend evaluative language, particularly Appreciation, and how to identify it in texts. Isaac was able to demonstrate his understanding of evaluative language when asked if knowledge of Affect, Judgement and Appreciation made him more aware when choosing language:

> Yeah (nods) because the Affect, if you want to like evoke emotions to the author, I mean to the reader…um, you want to include Affect and like Judgement is behaviour and Appreciation is how much you value it.

Half of the students said they did not fully understand what Appreciation was. Lisa said during the practices she found it really confusing in class because "I just didn't get it". When pressed further, she said: "I didn't get what Appreciation was". Noah said he did not really understand Appreciation as well. After completing her assessment, Isabelle said:

> Um…I think I did sort of okay on affect, but Judgment and Appreciation they're harder ones, but I really struggled with them because I didn't understand Appreciation that well.

Simone alluded to the pressure of analysing and responding to the text within two lessons:

> It would have helped to have more time. I didn't understand what Appreciation was better. I didn't know what that was.

Simone's assertion that more time was required highlights the difficulty in analysing a text where metaphors and symbolism were more evident in the visuals rather than the written features. Appreciation in narrative texts is usually identified through

descriptions of people and places. In *The Rabbits*, there was restrained use of written language to describe people, places and things, with the detailed and often abstract visuals extending meaning beyond the words. Students' responses that they did not understand Appreciation is more indicative of the lack of written examples of Appreciation in the text, thus the challenge in finding them. Appraisal could have been applied to the teaching of the visual language of texts as well, in terms of reaction to and composition of texts. If a visual text is to be used for assessment, then the teaching of visual language must be given emphasis during the unit as well.

The difficulty students experienced in identifying Appreciation would have been evident to teachers if an analysis of the evaluative language features of the text was completed prior to handing out the task. Appreciation in narrative texts is use of language in the evaluation of the physical appearance of people, descriptions of settings and things. There was only one example of Appreciation in terms of descriptions of people and places:

> They looked a bit like us.

There were a few more examples of Appreciation in descriptions of the setting, but they only occurred in the final lines of the text:

> The land is bare and brown and the wind blows empty across the plains.
> Where is the rich, dark earth, brown and moist?
> Where is the smell of rain dripping from the gum trees?
> Where are the great billabongs, alive with long-legged birds?

Only one student, Bridget, identified Appreciation correctly:

> The 'Bandicoots' have been show to value the land through the words "where is the rich, dark earth, brown and moist?" The words showed the 'Bandicoots' miss the rich brown earth because they valued it.

While Bridget correctly identified Appreciation in terms of descriptions of the land, she also demonstrated a common misinterpretation evident in students' writing, that of a literal interpretation of appreciation relating to people. This is where appreciation has been interpreted more as a feeling, that of liking or being grateful for something. Bridget stated:

> The aboriginals show appreciation through the words we liked some of the food and we liked some of the animals. The 'Bandicoots' appreciated some food and animals of the 'Rabbits'.

Liam also used the same example to justify his identification of Appreciation:

> This phrase implies that the indigenous people enjoyed some food that the non-indigenous settlers brought and made and some of the animals the rabbits brought from their home country.

Isaac also used the same text excerpt of liking some food and some animals as an example of Appreciation. This is more an example of Affect, where there has been an explicit statement of feelings in the word "*like*". What also impacts on the meaning of the statement is modality, in the use of the word "*some"*, which lessens the certainty of the emotion being expressed. Students' lack of understanding of Appreciation, evident in both oral and written responses, highlights that perhaps analysis of this language feature is conceptually beyond students, despite the complexity of the text.

6.3.4 English – Textual Function of Language

The impact of repeated practices in English was evident in students' organisation of their assessment responses. Students said they used the Text Analysis sheet to help them structure their responses by following the order of language features set out on the sheet. Students were familiar with the content they were expected to include in each paragraph, evident in Connor's outline of what should be included in the introductory paragraph:

> It consisted of um…reference, the author, what type of text it was, and it's slightly introduced…it sort of introduced what the text was about or what was like made for like the theme, the message…I think the time and setting was also in it.

The key elements of the introductory paragraph are evident in Lisa's response:

> 'The Rabbits' is a book written by John Marden and illustrated by Shaun Tan in 1998. It is a written and visual text and its purpose is to tell a story and informs about the British Invasion and what non-indigenous Australians did to the land of the Aboriginals. It is set in Australia from the settlement of white Australians. Throughout the book evaluative language is used to help you understand the meaning of the story.

Lisa has explicitly outlined who the author and illustrator are, what type of text it is, the purpose of the text, where it is set, and the purpose of examining evaluative language in the text. Lisa's assessment response to *The Rabbits* displays

development in text organisation skills, when compared to an earlier response she had written in class to the song "Solid Rock" (Table 6.21). In this response, the author details, purpose, subject matter and theme are spread over two paragraphs, and there is no preview or consideration given to evaluative language:

'Solid Rock', written by Shane Michael, Howard Warrick and Barry Wright in 1952, is a written text and song performed by the band 'Goanna'. The purpose of this text is to raise white Australians awareness of injustices inflicted upon indigenous peoples of Australia. The subject of this song is that histories of Indigenous struggles and their sacred connection to the land. The main message of this text is that white settlers disturbed the lives of Indigenous and greatly effected them.

Table 6.21: *English – practice response (Lisa)*

When compared to her response to "Solid Rock", Lisa's response to *The Rabbits* is more cohesive and previews that she will be discussing evaluative language in the text, unlike the "Solid Rock" response. Liam also demonstrated his progression in the organisation of his introductory paragraph in *The Rabbits*. For his "Solid Rock" response, Liam has constructed the following introductory paragraphs (Table 6.22):

The song Solid Rock performed by the band is a song that informs the listeners about indigenous perspectives. It is set in the contemporary time of 1982, Australia. This song is a written text and because it has a film clip it is also a visual text. The authors are Shane Michael, Howard Warrick and Barry Wright. This song informs listeners about the history of indigenous struggles and their sacred connection to the land we now call Australia. The message in the song Goanna is about white settlers interrupting the lives of the indigenous Australians. The settlers have greatly interrupted the aboriginal culture and way of life.

Table 6.22: *English – practice response (Liam)*

In his first paragraph, Liam included details about the song, stating that it informed listeners about 'Indigenous perspectives'. He elaborated upon this in the second

paragraph, providing more specific detail that the song "informs listeners about the history of indigenous struggles and their sacred connection to the land we now call Australia". The last two sentences of the second paragraph repeated the same information, perhaps highlighting that Liam was unsure of how to conclude the paragraph. The response reads as though Liam was following a list of features he had to respond to, which is exemplified on the Text Analysis sheet. Through repeated practice and feedback from his teacher, by the time Liam completed his assessment response to *The Rabbits*, he was able to develop separate points into a cohesive paragraph, evident in Table 6.23. In this response, Liam orients the reader to evaluative language in the text and thus signals what he will be discussing.

The book "The Rabbits" written by John Marsden and illustrated by Shaun Tan includes evaluative language such as Affect, Judgement and Appreciation. The Purpose of this book is to raise awareness about what happened when the non-indigenous people (the 'rabbits') settled in Australia and their impact on indigenous Australians (the native animals) culture and way of life. The book is about "The Rabbits" (non-indigenous settlers) taking over the native Australians land. This book includes written and visual elements to explain the story. This book is set when non-indigenous Australians settled in Australia 1600's. The main theme or message of this book "The Rabbits" is about the non-indegenous Australians "The Rabbits" destroying what once was a peaceful and calm place and turning it into a wasteland because they didn't look after the land like native Australians. The Rabbits is written from an indigenous perspective.

Table 6.23: *English – assessment response (Liam)*

Liam's introductory paragraph in response to *The Rabbits* not only demonstrated greater cohesion and confidence in text organisation, but also Liam's developing skill in using evaluative language to make judgments about the text. Through the use of words "*peaceful and calm*" and "*wasteland*", Liam has signified his understanding of Appraisal using language to make judgements about the meaning of the text. What Liam could benefit from is knowledge of nominalisation to assist him in developing a more academic style of writing. Liam has used nominalisation in the

word "*impact"*, but verbs such as "*taking over"*, "*destroying*" and "*turning"* could be nominalised to create a more academic tone. For example, *taking over* could become *the takeover* or *acquisition* of native land; *destroy* could become *destruction;* and *turning it into* could become *creation*. While analysis of student writing can provide insight into their progression as writers, it can also highlight areas for future development.

6.3.5 English – Evaluative Language

The purpose of students' exposure to evaluative language was to not only assist them in making meaning of the texts they studied, but to apply Affect, Judgement and Appreciation when making their own evaluations of the texts. The development of the interpersonal function of language is important in English, as students evaluate differing perspectives and demonstrate a growing awareness of how they can use language to influence their audience (Christie & Derewianka, 2008). All students demonstrated an awareness of how they could use language to both make evaluations and position their readers, although some more successfully than others. An examination of Mack's paragraph (Table 6.24) about the use of evaluative language to make judgments in *The Rabbits* highlights how he is developing proficiency in writing literary responses, particularly in using vocabulary selectively to analyse the text.

The ethical judgement of this book is that the non-indigenous Australians were inhumane. A written example from the text of this is "And stole our children". This brings up the Stolen Generation as the children of the "bandicoots" were taken away to be institutionalised. The visual example from the text is pages 17 – 18 as it shows "bandicoots" held against their will, like animals, by the "rabbits". The indigenous actions are considered justified by the book. This is because their sacred land was being taken away and nothing is more important than culture. An example of this is "sometimes we had fights". This mentions indigenous Australians fighting back to stop the genocide. Genocide is the destruction of a race. The visual example of justification is page 12 where the environment has been destroyed by the introduced animals. This negative book gives a positive reaction as it is effective and truthful. A written example of this is "we liked some of the food" as it shows that they are not

lying by saying all introduced things are bad. A visual example is page 5 as it depicts a "rabbit" trading with a "bandicoot". This shows that the book is willing to tell the whole truth.

Table 6.24: *English – Mack's use of evaluative language*

Analysing Mack's text in terms of use of evaluative language highlights the power of functional language analysis in enabling practitioners to make detailed assessments of students' writing proficiency (Fang & Wang, 2011). Mack demonstrates he understands the purpose of judgement as an analytical tool through the use of the word "ethical", making his overall assessment that the writer positions us to view the treatment of non-indigenous Australians as "inhumane". He is able to support his assessment with an example from the text, followed by his interpretation of what the text represents. This demonstrates Mack's developing knowledge of the textual function of language, where he has identified the significance of the quotation, then followed with an analysis of the impact of the word "stole". To show that he understands the meaning of the words, Mack brings in his knowledge of the Stolen Generation, using capital letters correctly to signify its importance as a concept. He then reveals his understanding of what the Stolen Generation represents through the use of the word "institutionalised". Mack's use of evaluative language is developing in sophistication, evident in use of the metaphor "like animals" to describe the visuals in the text. Graduation is the intensification of language, and Mack has intensified the depth of his analysis through the use of a metaphor. The statement: "The indigenous actions are considered justified by the book" highlights how Mack has understood how he is being positioned as a reader to view the written and visual representations in the text. He has used strong modality in the words "nothing is more important than culture" to strengthen his evaluation of the text, also demonstrating through a reference to "Genocide" how he can link to knowledge beyond the text to understand the significance of the written and visual representations. Mack's work exemplifies extensive vocabulary knowledge, evident in his substitution of "introduced animals" for "rabbits". The statement "This negative book gives a positive reaction as it is effective and truthful" highlights how Mack is positioning us as readers to view the negative representations of the rabbits as being accurate and constructive through his use of evaluative vocabulary

"effective" and "truthful". Mack further positions us to accept his judgement of the book by introducing an example showing some positive evaluations of the rabbits, namely "we liked some of the food". Mack's final sentence and evaluation that the book is "willing to tell the whole truth", links back to the "ethical" judgement given in the topic sentence. Mack's writing progression in the experiential function is also evident in the paragraph, in the variety of clause structures and complex nominal groups such as "the visual example of justification". He is also dealing with increasing abstraction in his lexical choices with words such as "justification" and "institutionalised". An analysis of Mack's response demonstrates not only how he is developing increasing knowledge of how to use language to construct literary responses in the discipline of English, but how the explicit teaching of writing has resulted in his growing discernment as a writer.

All students were able to demonstrate their use of evaluative language to make assessments of the text. Liam uses the word "destroy" to emphasise the impact of the rabbits on what was once a "peaceful and calm" land. Isaac said the visuals and written text combine to create a "confronting and emotional, yet remaining abstract book". Lisa used evaluative language to describe the rabbits as "overpowering" and the indigenous Australians as being "mistreated". Tom's evaluations of the text were restricted by his vocabulary choices, and he could benefit from further development of his knowledge of vocabulary so that he can demonstrate greater precision in his evaluations. Tom uses the statement "gets worse and worse" twice to describe both the book in general, and the impact of the rabbits on the bandicoots. He also uses makes the judgement "very bad" a couple of times during his response to describe specific aspects of the text. Students' use of language to make their own judgments of the text demonstrates how the explicit teaching of using language to make evaluations has enabled them to develop their knowledge of how to construct literary texts, a key genre in the discipline of English.

6.3.6 Section Summary

In English, students appreciated the process of modelled, guided and independent writing in preparing them for their assessment of constructing a literary response to a text. They expressed their growing confidence in writing their responses as the unit progressed through repeated opportunities to practise their

writing and receive feedback. However, the use of a picture book in the assessment task, when students had been deconstructing songs and poems, did not effectively represent students' learning experiences throughout the unit. Students were only exposed to one visual text early in the unit, and did not have an opportunity to respond to a visual text in preparation for their assessment. The choice of text impacted on students' ability to demonstrate their knowledge, as they felt less confidence in analysing a visual text, and they had difficulty in identifying all aspects of evaluation in the text. The repeated classroom practices enabled students to develop awareness of how to use language to make evaluations in their own writing, with all students being able to apply this in their own responses, with varying success depending on their vocabulary knowledge. While emphasis in English was on writing throughout the unit, the assessment task could have been designed more effectively to reflect classroom learning.

6.4 Chapter Summary

Simone's assertion at the beginning of the chapter that all assessment in Year 8 is difficult is indicative of the challenges in enacting curriculum plans in high school. Currently teachers in most Australian states have to contend with interpreting the Australian Curriculum in a range of subjects to develop units of study that not only reflect curriculum goals, but meet the needs of a diverse range of learners as well. While Queensland teachers have access to C2C units of study based on the Australian Curriculum, these units have in some way added to the complexity of learning in specific subject domains. In the C2C units in Science and History adopted during this study, the high degree of content specificity and ambitious assessment demands significantly increased the learning demands encountered by both teachers and students. Because teachers have viewed the C2C units as the Australian Curriculum, there is fear that if they veer from the highly prescriptive unit outlines, they will not be covering the Australian Curriculum and thus disadvantaging students. The C2C unit outlines, although highly prescriptive in terms of what should be taught, lack detail about how information should be taught, and fail to adequately address Literacy as a General Capability in the Australian Curriculum. This study attempted to focus on Literacy as a General Capability by focusing on the explicit teaching of writing concurrently in the subjects of Science, History and English, and whether that has led to greater proficiency in students'

writing. The interventions in Science and History were limited due to curriculum and time constraints, but there is some evidence in students' responses that what was taught – minimal though it was – did have some impact on the construction of students' texts.

This chapter also evaluated assessment tasks in the subjects of Science, History and English to ascertain the literacy demands required for the successful completion of tasks. In English, students were given repeated opportunities to practise their writing, but the task design did allow students to best demonstrate how their knowledge of writing had developed during the unit. The C2C assessment tasks in Science and History were also poorly designed, particularly in units emphasising content over knowledge of language, where students had limited assessment preparation. Students' responses highlighted they valued the use of exemplars in providing them with an understanding of performance standards (Wyatt-Smith & Cumming, 2003). An exemplar was created for the Science assessment task because as was evident in Wyatt-Smith's and Cummings' study of the senior years of high school (1999), many students appeared to be "working in the dark as to the nature of a quality performance" (2003, p. 53). The C2C-generated exemplar in History did not exemplify effective use of language to demonstrate a clear link between research questions and responses. While two exemplars were used throughout the English unit, the text used in the assessment task was not the same text-type studied in class, reflecting a misalignment between classroom learning and assessment. It is clear from the study that poorly-designed assessment tasks impacted on students' abilities to successfully demonstrate their learning, and lack of time was also a considerable constraint. Despite limited time available in Science and History to explicitly teach writing and the literacy demands of assessment tasks, there is some evidence, particularly in terms of the textual features of language, of improvement in students' responses.

The next chapter focuses on students' reflections of their learning, and consideration of the three research questions and whether the project achieved its aims. Limitations of the project will be examined, and the implications for ongoing research will be considered.

Chapter 7: Don't assume I know…

Interviewer: *What could teachers do to help students?*

Simone: *They could work together more and maybe like describe things better because some teachers are like, you should already know this.*

Introduction

Assumptions are dangerous in teaching, unless they're the topic of exploration in a classroom, where learners test the accuracy or inaccuracy of an assertion. Units of work are designed and predicated on the belief that new knowledge is built upon previous learning stored away in students' minds, ready to be activated again when an appropriate signal is given. However, as demonstrated by learners in the study, some of them face significant challenges progressing in their learning when they find it difficult to retain knowledge. In this study, Year 8 students' knowledge of curriculum literacies was focused on content, which reflects the emphasis given to content in curriculum documents and in the classroom. From their content knowledge, students recognise that each subject has its repertoire of topics and subject specific words that may prove challenging to master. When pressed, students can articulate differences between subjects beyond content as they start to recognise that there are genres specific to each discipline, which require organisation of information in particular ways. However, if student knowledge of curriculum literacies is to progress beyond understandings of content differences, there must be greater attention given to knowledge other than content knowledge, including the representation of learning in the key genres of each discipline. Contending with external curriculum pressures and internal timetabling demands, students are completing assessment but not deepening knowledge of the language or literacies of specific disciplines beyond content. Without curriculum reviews and internal school efforts to focus on knowledge beyond content, particularly knowledge of writing, students are danger of graduating from school still as apprentices in the key disciplines they are meant to have learned.

Assumptions are also evident in the differences between the official and enacted curriculum, as well as the school's stated focus on disciplinary literacy and

the subsequent lack of emphasis given to it in the classroom. At all levels of the education system – the state education authority, the school, the classroom – there are significant mismatches between what is planned and what is enacted. These mismatches are limiting students' abilities to develop the subject-specific literacies they need to succeed in their learning.

Chapter Summary

This chapter will summarise the major insights provided by the study in answer to the research questions outlined in the introductory chapter. In Section 7.1, the revelations from the study concerning Research Question 1 – *What knowledge of curriculum literacies do students have in their first year of high school, and how does this knowledge develop* – will be highlighted through a review of the school's approach to literacy, assessment demands, and an exploration of the student responses concerning the enacted curriculum. Section 7.2 explores the impact of specific subject communities or discourses on students' learning and identity, and will provide insight into Research Question 2: *How do students manage the "semiotic-shifting" from one subject to another?* Research Question 3 – *Does the explicit teaching of writing, particularly through a functional language approach in a number of subjects concurrently have a positive impact on student learning*? – will be considered in Section 7.3 focusing on students' writing development in three units of work.

7.1 A Disciplinary Literacy Approach?

For a school that prides itself on its whole-school approach to literacy across and within disciplines, there is a significant mismatch between what is espoused, and what is enacted. When planning this study, I believed the school provided the appropriate context for the achievement of the research aims, particularly the explicit teaching of writing within specific subject areas and how that might inform pedagogy. Commitment to staff professional development in literacy is evident at the whole-school level, with the school administration continuing to provide opportunities for staff to access Education Queensland's *Literacy the Key to Learning* (Queensland Government, 2009) professional development program. While the program no longer operates at the systemic level, the school allocates significant funds to this in their professional development budget, with a further 24

staff to be trained in 2014. The *Literacy the Key to Learning* (Queensland Government, 2009) program has been adopted because of its emphasis on language and teachers assuming responsibility for teaching the knowledge, skills and practices students require to succeed in specific subject areas. The belief in the building of teachers' capacities to identify and teach the literacies of their subject areas is also replicated in the Australian Curriculum *Literacy as a General Capability* (ACARA, 2014a) statements. While the school supports the development of teachers' skills in teaching the literacies of their subject areas through professional development and my role as literacy coach, the study has revealed significant constraints – some school-imposed – that prevent teachers from enacting their learning in the classroom. Without a progression in the knowledge and pedagogies of the staff, improvements in students' learning will also be limited. Rather than the teachers in this study being ill-equipped to teach the literacy demands of their subject areas, as is evident in research (Fang 2012, Moje 2007), they need the conditions and support to implement knowledge gained through professional development. The teachers in the study did not feel confident to explicitly teach aspects of writing in one or two rushed lessons, but welcomed opportunities to develop their knowledge and skills over more extended periods of time, as was intended. To allow teachers opportunities to explicitly teach the literacies of their subject domains, school staff must review the curriculum and acknowledge constraints if a disciplinary literacy approach is to be achieved.

7.1.1 The Mismatch Between Learning and Assessment

The adoption of C2C units in Science and History was a significant factor impeding efforts to implement a disciplinary literacy approach within the school and expand students' knowledge of curriculum literacies. Despite schools being advised to "adopt or adapt" the materials as appropriate, enacting the curriculum results in a severely truncated unit outline where the assessment task is adopted along with whatever content objectives are achievable within the time allowed. This mismatch between assessment and learning objectives was evident in both Science and History. In Science, students' responses demonstrated they struggled to complete the third body paragraph of the assessment task, where they were required to evaluate whether an organism could function without a specific cell, and the treatment for this. The information and analysis students were required to present concerning cell function

and treatment was evidence of Criterion Three on the task – Knowledge of Science as a Human Endeavour – which focuses on human intervention in scientific processes. However, due to the overwhelming amount of content to be covered in a limited timeframe, little attention was given to the application of cell theory and the impact of scientific research in the area. In History, as only two-and-a-half lessons were devoted to exploring the unit content, students completed their assessment without fully comprehending the broader context of feudal Japan and the influence of their chosen shogun in relation to the influences of other shoguns. In the enacted curriculum, when time compromises the completion of the full unit and its learning objectives, emphasis shifts to completion of assessment rather than expansion of disciplinary ways of thinking, constructing and responding to texts. The study revealed that even the expansion of students' content knowledge is compromised when units are dramatically reduced in learning time, with students exposed to as many of the original content objectives as can be achieved in limited time, rather than an in-depth focus on one. When the content and learning objectives of the unit have been altered without a resulting change in the assessment task, it is no wonder students struggle to comprehend assessment task requirements, let alone fulfil them.

The English assessment task, although school-designed, also exemplifies what can happen when assessment does not reflect classroom learning, particularly the impact on the learner. The students in the study felt confident about completing their English responses – moreso than demonstrated in their Science and History assessment - because of the considerable opportunities they were given to practise writing literary responses. Students were supported in their writing throughout the unit with exemplars, guided and independent practice. Student disappointment in their English results was clearly discernible, particularly in the responses of Isaac and Isabelle. After completing the task, both expressed confidence in their responses, despite Isaac being absent for a lesson and having to rush his response. When questioned after they were given their results, Isabelle said the result was worse than she expected:

I just expected I'd get a B- but I got a C so it's like a bit disappointing for me. When asked why she thought she didn't do as well as expected, Isabelle said she had some spelling mistakes and that she "wasn't very prepared for this one". Isabelle said she was more prepared for the practice response, but found the actual

assessment "a lot harder" because she struggled to find examples of evaluative language. Isabelle thought she could have done better if she looked at more examples. Isaac also thought he would have done better, saying "I guess I'm really disappointed…um…I'm not exactly the greatest in English. That's not really my strong point." Isaac almost became apologetic about his result, as he struggled to review his paper and articulate what "brought my mark down." It is also clear to see that Isaac's confidence and identity as a student of English has been affected when he says English is not his strong point. Isaac equated length with a quality response, saying "I got two-and-a-half pages. That's pretty decent", but like Isabelle, acknowledged difficulty in finding examples of evaluative language:

> It's just really understanding language techniques like Affect, Judgement and Appreciation. They're really where I've stuffed up.

Although Isaac's response demonstrates he struggled to identify use of evaluative language in his assessment response, it must again be acknowledged that the text used for assessment made it difficult for students to locate examples of evaluative language. Both Isaac and Isabelle's review of their assessment responses demonstrates they believed their results were a reflection of a deficiency in their efforts, rather than use of a text for assessment that did not reflect classroom learning. Students struggled to find examples of evaluative language because there were limited examples in the written text, which had to be read in the context of complex, abstract and highly detailed accompanying visuals. Although students' written responses demonstrated effective control over textual features such as paragraph structure, and interpersonal features such as use of language to make their own evaluations of texts, they struggled with the experiential function of language because they were not able to identify and support their analysis of the text with appropriate examples.

The English assessment task demonstrates the relationship between disciplinary knowledge and disciplinary ways of making meaning: that production of knowledge requires understanding of disciplinary ways of organising and representing information, as well as a deep understanding of the specific field or topic under investigation. What students lacked in responding to the English assessment task was understanding of the field of literary response, because the text

used was not an adequate or appropriate representation of what they had studied in class.

The study has highlighted the significant challenge in producing quality assessment tasks that not only reflect student learning (Biancarosa, 2012), but are representative of the broader disciplines of knowledge students are being acculturated into. The study revealed when enacting the curriculum, promotion of the specific ways of thinking and producing knowledge in disciplines had been significantly diluted, even lost. This lack of clarity concerning the specific ways in which disciplines organise and represent information was evident in all three subject areas: Science, History and English. While the report genre is a key genre in Science and History, it was not emphasised in the heavily scaffolded Science assessment task and the construction of a scroll in History. Even after completing their Science task, students did not realise the final product was a report. With the emphasis on the production of a scroll in History, without reference to the broader report genre, students will find it difficult to link to prior learning when they encounter the report genre in greater complexity in subsequent year levels. When teaching a Year 9 English class earlier this year, I realised by focusing on evaluative language in songs and poems in English in Year 8, the disciplinary genre of literary analysis had been compromised. When I asked students about their prior learning in poetry during the Orientation phase of a Year 9 Poetry unit, some students said they had not done poetry; some said they had done poetry in Year 7. I had a 'light bulb' moment where I realised that in Year 8, while students had explored a range of songs and a couple of poems in the Year 8 *Indigenous Perspectives* unit, they had not used the appropriate disciplinary lens of evaluating poems in terms of poetic devices and techniques. In fact, analysing songs – poems set to music – in terms of evaluative language, not only limited the responses of students, but did not reflect an appropriate disciplinary way of studying these texts. This mismatch between texts and the appropriate disciplinary frames to analyse the texts leads to a broader question raised by Moje (2007) whether we "really know enough about the literate processes and practices of the disciplines" (p. 35).

The study revealed a significant misalignment between content objectives, assessment task requirements and students' responses. The implementation of the

C2C units in Science and History resulted in significant reductions in the lengths of both units, compared to the planned curriculum, whereas assessment tasks were adopted in their entirety. This reduction in length meant that some content and skills to be assessed via assessment tasks were given limited attention in classroom activities. Time constraints also meant students did not have opportunities for guided practice, where they could practise a skill such as paragraph writing or diagrammatic representations of cells, seek teacher feedback and guidance, and refine their skills before constructing assessment responses. Thus, in Science and History, in constructing their assessment responses, students were practising their writing without prior opportunities for practice and feedback. Even though handing in drafts was a requirement of both tasks, the amount of "fixing up" some students were advised to do suggested that they would have benefitted from further practice opportunities, allowing them to develop greater understanding of task requirements. The English assessment task highlighted the misalignment between content that was studied in class, and content that was assessed in the assessment task. Understanding and knowledge of visual literacy was a significant factor in students successfully reading and comprehending the text used in the assessment task, but they only had limited exposure to visual texts during the unit. The description of task requirements on the task sheet were so broad that without repeated opportunities for teacher guidance and feedback during the unit, students would have found it difficult to comprehend what was required for an effective response. As in Wyatt-Smith's and Cummings' (2003) extensive study of the senior high school curriculum, students in the study lacked a clear understanding of expected task requirements and performance standards. When teachers are overwhelmed by what is planned in the curriculum, and what they have the ability to enact within school timetable constraints, assessment and content become the drivers of the curriculum.

7.1.2 The Primacy of Content

If a disciplinary literacy approach is to be evident in the school, students must be able to recognise differences between subjects beyond content:

> Being literate in a discipline means both deep knowledge of disciplinary content and deep understanding of the disciplinary ways of making meaning. (Fang, 2012, p. 20).

Subject knowledge or content has always been a key determinant in defining specific disciplines, particularly in terms of what makes them distinct from other subject areas. However, with the broad range of subjects currently on offer to students in high schools, there may be commonality in the topics being studied in different subject areas. For example, the respiratory system may be studied in both Science as well as Health and Physical Education. The focus, then, in differentiating between subjects must shift from content knowledge *per se*, to how that content is organised and represented in specific domains. For students, in the study, however, at the end of their first year of high school, subject differences were largely demarcated through content descriptions. This reflected the primacy given to content in classrooms and in assessment tasks, where students generally articulated that the main improvements they could make in their assessment responses was to add more information. For secondary teachers, "the time required for teaching basic subject content leaves little room for literacy learning in secondary education" (Wendt, 2013, p. 41). Emphasis on content, as was evident in this study, resulted in students struggling to identify the literacies specific to individual subjects. The knowledge of curriculum literacies students did demonstrate seemed to be gained implicitly through subject-related tasks rather than explicit teaching episodes. While some students were able to gain knowledge of curriculum literacies through doing, other students found it difficult to articulate subject knowledge beyond content.

7.1.3 "Content is the Most Important"

First and foremost, the subject knowledge students demonstrate with greatest confidence is content knowledge, identifying content as the major difference between subjects. When students were initially asked in the Group Interview what the major differences were between subjects in terms of reading and writing, they began with a focus on content, identifying the topics for their current units of work in English, History and Science. This was evident in James' response when questioned about the differences between subjects:

> Well, in SOSE this term, we've mainly been focusing on History, where in other subjects we'd be doing other things. Like with Science, we studied cells.

The emphasis on content was summed up in a statement by one of the students, Isaac:

> In like every subject, content is the most important because that's what you're expressing and how much you know.

While Isaac identifies content as the most important knowledge he is required to demonstrate in each subject, the use of the word "expressing" indicates Isaac's understanding that he has responsibility for organising and representing that knowledge. However, his response also indicates that he sees content knowledge as a variable that can be improved, whereas "expressing" is regarded almost as a skill students already possess. Students were only able to articulate differences between subjects beyond content after further questioning and reflection at the end of the term, during the Individual Interviews. Emphasis on content reflects two underlying assumptions: that breadth of study is more important than depth, and that "students must first learn what to think" (Cambourne, 2013, p. 11). These assumptions were evident in the C2C materials for History and Science, where emphasis in unit outlines was on information to be delivered to students. If other subjects across the curriculum support these assumptions as well, then this "promotes a pedagogy that places selecting, sequencing and transmitted content at central stage" (Cambourne, 2013, p. 11). This pedagogy supports the tradition that to think like a scientist, mathematician or historian will be an "automatic consequence" of the transmission of information (Cambourne, 2013, p. 11). With such limited time allocated to the teaching of dense unit content, then, it is not a surprise that students view differences between subjects as the result of content differences.

The emphasis on content is reflected in class activities, particularly in allocation of time in the subjects of History and Science. Historical and scientific knowledge are key criteria in both subjects respectively. Linking to prior content knowledge is also important in developing students' subject knowledge. As part of their introduction to Shogunate Japan in History, students were asked to link to their earlier studies of Medieval Europe during the semester, noting similarities and differences between the feudal systems of Europe and Japan. Students were asked to think of the "Pyramid" they had constructed for Medieval Europe, showing a hierarchy of social contrasts. Understandings of what both societies valued were developed through noting differences in the size of the warrior class, as well as the

position of artisans and merchants. By noting that artisans and merchants were positioned below the peasant class in Shogunate Japan, students were able to discern that artists and merchants were not considered to do work of value, unlike the peasants. Through a comparison of the two systems, students were able to develop their subject knowledge as well as skills in comparing and contrasting, important in demonstrating evaluation in History.

The primacy of content in History and Science was also evident in the encouragement of students to research widely, with time allocated in computer rooms for research. Students were required to document the "research journey" in research journals, which had the dual purpose of allowing students to record their notes, as well as bibliographic details of texts. Students' knowledge of the importance of attribution and referencing were evident in their interview responses, where they continuously referred to the importance of "putting things in our own words." The Science assessment task, in particular, through its use of highly specialised scientific language such as *organelles* on the task sheet, demanded of students a sound knowledge of cell structures. During research lessons in Science, students were encouraged to spend time accessing a wide range of websites for information before they began writing, further emphasising how a high degree of content knowledge was valued in the completion of the task. In History, the importance of documenting research was even more strongly emphasised, reflecting its importance as a subject literacy, particularly as students progress towards their Senior years. In class students asked about the amount of primary and secondary sources they were required to have documented in their bibliographies, their familiarity with these terms reflecting their exposure to them previously.

7.1.4 Improvements in Learning

Students also invariably viewed content as the major area of improvement in all of their assessment tasks. When asked what they found most challenging about the Science task, all of the students identified information as the main area for improvement. Simone, Connor and Isabelle found it was difficult to find information on their chosen cells, leading them to assume their selection of cells made the search difficult, rather than the lack of information at an appropriate level for them to understand. Noah said he could improve by "researching a bit more and probably

explaining it in greater detail", highlighting that he felt there was appropriate information on his chosen cell, but he had not researched widely enough. Bridget also said she could have improved her result by finding more information. Isaac said: "Maybe I could have used my information a bit more", alluding to the fact that he had enough information, but wasn't sure of how that information should be organised and represented to respond to the key elements of the assessment task. When asked whether information was important in Science, Isaac answered: (Nodding) "Yeah, its all information". Locating appropriate information was the major challenge identified in Science by all eight students, supporting Isaac's assertion that "information" is of prime importance in the subject. The difficulty in locating information students could understand was highlighted by Isabelle, when discussing websites she had searched:

> Some of them were really like hard to understand. I didn't know what the words meant and stuff.

Isabelle's response demonstrates the difficulty in not only locating information, but language used to represent information in Science can be highly technical and difficult to comprehend. The difficulties students encountered in deciphering digital texts in particular implies teachers might not only need to conduct internet searches and locate appropriate sites for students to access, but to explicitly teach students how to contend with the demands of reading digital texts as well (Biancarosa, 2014). All students identified locating information about organelles, the specific parts of cells, was the major challenge, with students identifying that there was less information on some cells than for others. With an emphasis on information and content, students are failing to comprehend that just as important is the way in which information is organised and represented. No matter how much information students research and collect, it is what they do with this information and how they represent it in assessment tasks that is the key, an area that is significantly neglected in high school learning at present.

Mastery of content was certainly a challenge in English, as has been outlined in the previous chapter, particularly the choice of text for analysis and students' difficulty in understanding what the Appraisal resource of Appreciation was. Students felt they could have improved their responses if they included more information, particularly supporting examples. Simone said:

> I could have improved it by putting m examples on it. I didn't really have many examples on any of the evaluative language sheets.

Lack of examples demonstrates a lack of understanding of evaluative language, particularly Appreciation. Noah also felt he could have added in more examples to justify his comments about *The Rabbits*. However, students' beliefs about the primacy of content in the completion of assessment tasks did not always match with teacher feedback. For example, Connor thought his English response could have been improved if he had gone home and looked at the text, and chosen better examples, saying he thought the improvement required was "a tiny bit in the way it was written, and a fair bit of the content. " However, when asked to read his feedback, areas of improvement identified by the teacher were structure and cohesion:

> Ah, I need a little more help on the paragraph structures. Ah, I need to link back to the main purpose a bit more. Yeah, it's pretty much it.

While this feedback is helpful, the next step for Connor would be to analyse where he needed to improve his paragraph, and where he could make links back to the purpose of the task. If these elements of writing are not taught in the classroom, and students do not develop a language about writing, then students may continue to assume that knowledge is the main area for improvement in assessment responses.

In History students still emphasised the importance of information, although they found researching the History task much easier than researching the Science task. This not only reflects the breadth of information that was available on their chosen shoguns, but also the fact the information may have been more accessible because it was written in a way students could understand. Isaac was happy with his response:

> Yeah, I found some pretty good information on this one.

Isaac's statement reaffirms his belief in the primacy of content, which he also expressed in relation to his Science task. Simone said the task was "quite easy because there was a lot of information about my person". For Isabelle, the amount of information to include in her slides presented a conundrum: "You have to put enough information but then not too much". Information was also emphasised in the C2C exemplar with notations made concerning the information required, rather than how it should be represented and organised. Interestingly, after the example

paragraphs about Jandamarra were taught to students in a lesson, Noah and Connor both said they went away and added more information to their draft responses. The emphasis in that lesson was not on content itself, but how clauses could be used to expand meaning. This leads to a consideration that perhaps students' responses are sometimes lacking in content detail because they are not sure of how to best represent the information in the specific text required of the discipline.

7.1.5 Importance of Metalanguage

If the explicit teaching of writing and other curriculum literacies is to be effectively enacted through a disciplinary literacy approach, students and teachers require a resource to assist them to discuss features of the texts and language specific to individual subject domains. The resource required to mobilize students' and teachers' understanding of how language and grammatical forms are deployed within different subject areas is metalanguage – a language to talk about language (Unsworth, 2001). While students in the study were comfortable using the term metalanguage when referring to differences between subjects, they were not using it in its strictest linguistic sense of "language used to describe language" (Henderson & Exley, 2012, p. 23). Even though metalanguage can also refer to the "jargon, or particular language of a specific discipline" (Henderson & Exley, 2012, p. 23), when students in the study used the term it was in reference to topic words rather than language features of a specific discipline. This seemed to result from the use of the term metalanguage in C2C handouts, such as the *Year 8 History Metalanguage – Japan Under the Shoguns* handout given to students, which included the meanings of topic-specific words such as *daimyo, shogun, Confucianism, Shinto* and *deforestation*. These words related to *Japan Under the Shoguns* could also be encountered in other subjects such as Art, if students were studying Japanese Art; in English, if students were studying a historical novel set in Japan; and in Study of Religion, if students were studying religious movements such as Confucianism and Shintoism. So when Isaac referred to metalanguage as the langague specified for each subject, he was referring to specific content words listed on C2C materials. The only subject students could refer to with specificity of metalanguage was English. Students referred to the use of evaluative language in English, because this was explicitly taught during lessons, but found it more difficult to articulate the metalanguage of other subjects, evident in Isaac's response:

> That there's a lot of different ways to write in each subject. Like this (pointing to English response) you have evaluative language like Affect, Judgement, Appreciation and this one (pulls across his Science paper) like Science has its own metalanguage, like scientific words, um, all related to Science.

Isaac is able to name forms of evaluative language in the subject of English, but finds it difficult to specify the "scientific words" related to this content area. James' response demonstrates how use of metalanguage assists a learner who identifies as 'struggling':

> Um, the writing between subjects and…yeah, the writing between subjects is very different, because like, English and SOSE and stuff like that you've got to use persuasive, evaluative and all that other types of…confusing types of language.

James is able to recognise that distinctive text types in English and SOSE have associated language features, such as persuasive and evaluative language. However, he says he finds other language confusing – perhaps this highlights that without knowledge of a metalanguage beyond topic-specific words, students experience difficulty knowing and understanding the literacies of specific subject domains. James' response reveals the difficulty in learning a new language in each subject, and with 13 subjects during the year, this is an immense challenge. It means not only learning the technical and specialised language of specific subjects, but "the subtle and profound differences in language used in various disciplines" must be explicitly taught (Shanahan and Shanahan, 2012, p. 10).

The major challenge for Year 8 novices in the disciplines is developing their knowledge of academic language, which involves more than being given a list of key topic words at the beginning of the unit to learn and apply in their oral and written responses. As many students "rarely encounter" academic language outside of school, the assumption that they will pick it up informally through exposure will not occur unless it is explicitly taught (Schleppegrell, 2007, p. 126). The ways in which academic texts are structured and make meaning are very different to the daily, personal interactions of students outside the classroom. Without knowing subtle and significant differences between subjects in the ways language is used to present concepts and make meaning, this will impact on students' future learning:

> the ability to handle academic texts directly affects one's learning experiences, uses of school, access to education at higher levels, and a range of opportunities outside school (Fang & Schleppegrell, 2010, p. 250).

While much of students' language learning is implicit (Van Gelderen, 2012; Wyatt-Smith & Cumming, 2003), particularly in terms of 'everyday' and more 'spoken' language, the demands of academic language encountered in high school subjects requires explicit teaching. The need for explicit teaching of language was clearly evident in the study in the subject of Science, when Simone, in trying to avoid plagiarism, referred to the "*job of the cell"* rather than *"cell function*" in her assignment response. With explicit teaching of the metalanguage of Science, rather than topic-specific words, students would develop knowledge and understanding of how the word *function* is integral to comprehending many concepts in Science, and represents different meaning to the way the *function* is used in subject like Mathematics. The restrictions imposed by content-focused curriculum demands and school organisational structures meant there was limited opportunity in the study to explicitly emphasise how to use language to represent information (Butt, et al., 2000). This is a fundamental premise of disciplinary literacy, that learning the language of the discipline involves how to use language in a way that makes sense to other insiders in the discipline (Butt, et al., 2000). It is clear that knowledge of metalanguage, as was evident in Isaac's and James' responses concerning English, can assist students in being able to articulate, with greater specificity, differences between subjects in the organisation and representation of information. The development of students' knowledge and understanding of metalanguage specific to subject areas is an area for further exploration in the future, as it is integral to students' success in schooling.

7.1.6 Knowledge of Genres

One of the "key ingredients" in disciplinary literacy is students' engagement with texts (Moje, 2008, p. 102). Within schools, it is important that students are provided with opportunities to "examine how the norms of knowing, doing and communicating are constructed" in each discipline (Moje, 2008, p. 102). Students in their first year of high school demonstrate they have developed knowledge of the texts that are privileged within disciplines, as Bridget was able to explain:

> Um, well, in Science you do a scientific report, and English, like an analysis of text and in SOSE maybe write about a person.

Bridget's response demonstrates, like students' responses concerning metalanguage, that the most recent topic knowledge or text types students have written are the ones they refer to when discussing what they have learned. This also perhaps reflects that within their first year apprenticeships in high school disciplines, students have not yet developed a broader understanding of the thinking, comprehending and ways of responding that are privileged within specific disciplines. This generally becomes more obvious to them as they progress through year levels, when skills and knowledge are further developed through repetition and practise. Isabelle spoke about differences between genres she had learned from completing her Year 8 assessment:

> Like Science, it's completely different like you definitely would have, like, a method in Science and not in English, so it's very different.

Isabelle's response demonstrates that she has acquired some knowledge of "socially valued ways of making meaning" (Christie, 2012, p. 61) within specific genres, such as method in scientific experiments. Isaac highlighted differences between genres when he said "there's lots of different ways to write in each subject", referring to diagrams and bibliographies that were a specific feature of science reports. However, while students can identify some features of genres, applications of these features in their own writing remains a significant challenge. Although Isaac knew he had to use scientific language, diagrams and a bibliography in his Science report, his assessment response indicated he experienced difficulty applying this knowledge. Isaac critiqued his report as lacking scientific language, he included diagrams without referencing them in the written text, and his bibliography was not formatted correctly. The misalignment between assessment expectations and Isaac's response could be suggestive of one, a combination of, or all of the following factors – time constraints; lack of opportunities for writing practice; competing assessment demands across subjects; and ineffective scaffolding of genre and task requirements. As in the teaching of metalanguage, features of genres should be explicitly taught to "better scaffold the development of language and knowledge" (Fang & Schleppegrell, 2006, p. 248). During their high school studies within various disciplines, it is important for students to master the "patterned ways" of genres to critique and reconstruct them, even overturn them (Christie, 2012, p.61).

Knowledge of genres and metalanguage of specific domains of learning could also assist students in developing further understandings of disciplinary-specific ways of composing and comprehending information. While it is important in disciplinary literacy to teach students how the disciplines differ from one another (Moje, 2008), the "slicing up" of the secondary timetable in "subject matter bites" (Moje, 2007, p. 3) can prevent students from deepening their knowledge of curriculum literacies, as students are rarely given opportunities to consider not only differences between subjects, but similarities as well. When Isabelle was asked about differences between subjects, she responded:

> Like before this interview, I didn't really think about it that much, but when you think about it, it is very different.

It seems to be a significant revelation for Isabelle, to acknowledge differences between subjects. As Moje has highlighted (2008), disciplinary literacy "becomes a matter of teaching students how the disciplines are different from one another" (2008, p. 103), but this not only requires teachers to have the knowledge to explicitly teach the salient features of the genres in their discipline of expertise, but also knowledge of archetypal texts in other disciplines as well. The Year 8 transition team is a perfect vehicle to demonstrate how that can occur, but with teachers struggling to make sense of and deliver complex units of work and assessment tasks, there is little time to plan their own lessons, let alone confer with colleagues. Whether more detailed and specific knowledge of similarities and differences between disciplines and their texts can lead to greater precision in students' writing is something that could be explored in future research. When teaching the Year 8 students the example paragraphs about Jandamarra in History, I was able to link to some of the key features of paragraph and report writing that I had already taught to students in Science the previous week. In doing so, I was able to draw students' attention to the fact that while they were required to write reports in both subjects, one was focused on description of features and processes of organisms, while the other was concerned with evaluation of a person's life, their significance, and their impact on communities past and present. In this way, I was able to highlight that context and purpose delineated differences in how language was to be used to represent information in both subjects. This demonstrated that different purposes pre-suppose differences in the way disciplines represent information (Shanahan &

Shanahan, 2012). However, within one lesson, I was only really alerting students to similarities and differences; understanding and applying knowledge of those differences would require repeated revision and writing practice in those genres, which was beyond the scope of the study.

7.1.7 Similarities between Subjects

The chunking of the secondary school curriculum results in teachers and students making "little sense of coherent relationships among curriculum offerings and curriculum literacies as a whole within school" (Wyatt-Smith & Cummings, 2003, p. 55), providing minimal opportunities for students to not only consider differences between subjects, but similarities as well. The insular nature of subjects means students do not consider similarities between subjects in terms of modes of communication (Wyatt-Smith & Cumming, 1999), and subtle differences that might occur within specific subjects, which has the potential to deepen their knowledge and understanding of curriculum literacies. While students are able to identify differences between subjects, it seemed to be a greater challenge to identify similarities. When asked about whether writing was different in each subject, Bridget said:

> (Nodding) Ye..es (Some hesitation). But like, still like the paragraphs are the same. The same structure of paragraphs, but still different.

Bridget could identify that paragraphs across different subjects have "the same structure", which reflects the use of consistent approach to paragraph writing taken across the school. She can also recognise differences between subjects in terms of paragraph structure, but is unable to articulate what these differences are. Bridget's response exemplifies that it is difficult for students to articulate their thoughts, demonstrating that further development of a metalanguage would assist them in clarifying their understandings concerning subject similarities and differences, particularly in terms of writing. For example, if students were exposed to terms like "theme" and "rheme" across a number subjects, then this would assist them in articulating differences beyond content and language. Bridget was the only student to identify a similarity between subjects, and in doing so, she demonstrated she was aware of subtle differences between subjects as well, lacking a metalanguage to articulate this clearly. This lack of articulation has implications for future research, to

determine whether a common metalanguage across subjects could assist students to ascertain differences as well as connections between curriculum areas, to deepen their knowledge of curriculum literacies.

7.1.8 Science – Differences Beyond Content

By the end of the research project, students were able to demonstrate knowledge of curriculum literacies of Science beyond content and information, although this knowledge mainly concerned literacies required for the production of written tasks, including assessment responses. In the group interview, students drew attention to the practical nature of the Science. Isabelle's response was reflective of her experiences in conducting and writing the results of scientific experiments or "pracs":

> Well, you have to figure out…like…how you do method and stuff…like do methods, when you do a prac.

The use of metalanguage is evident in Isabelle's reference to "method", and she signifies that method is not only part of a written Science report, but is a thinking skill to be developed as students consider how experiments should be best approached. Connor also demonstrated his knowledge of writing practical reports in Science:

Connor:	You have to like add every detail in the prac that you were doing, like…
Interviewer:	Right.
Connor:	If it fizzed up and there's one abnormal bubble or something you have to add it.
Interviewer:	Do you understand why?
Connor:	Ye..es (drawn out)
Interviewer:	Why would that be?
Connor:	It could be important.

Despite his off-handed comments, Connor has perceptively highlighted that details which may initially seem irrelevant when conducting experiments may prove to be important, thus affecting the outcome of the experiment. For Connor, considering specific details and including them in written responses was something that differentiated Science from other subjects:

> In Science, you generally have to write very technically and have to tell every detail, unlike every other subject.

In this response, Connor not only demonstrates that Science requires the inclusion of precise and specific details, but that he uses highly technical scientific language to express these details. He further expanded upon the report genre, one of the key genres in which specific details must be expressed in Science:

> The layout's pretty important. With diagrams you need to label them, you need to draw them pretty accurately and the way you write. You can't really write with the words us, my, like…first person words I think they are. And it has to sound pretty professional, as if you're doing debating, I guess. Not 100 per cent like it but similar, I guess, just formal.

Connor is able to refer to language demands of scientific tasks beyond topic language, when he refers to the formality of language that is required, an implicit understanding of register. He has also developed some understanding of his position as a writer of scientific texts to write objectively, with minimal use of evaluative language, which is an important scientific literacy students need to develop in their adolescence if they are to progress in their senior scientific studies (Christie and Derewianka, 2008). Integral to students' success in factual genres such as scientific reports is that "academic texts, particularly those of factual genres, often feature a more objective, abstract and authoritative style of writing" (Fang & Wang, 2011, 149). Lisa also demonstrated her knowledge of the scientific report genre and the importance of attribution of sources, even though she found the process of researching and referencing "very annoying". Despite Lisa's annoyance in having to reference sources, she said she could understand the importance of acknowledging sources:

> Yeah, so you don't copy it straight from...(voice trailed away)

As already mentioned, referencing and attribution was a key curriculum literacy in Science that students acknowledged when they spoke about the importance of writing things in their own words. This posed great difficulty for them when it came to paraphrasing information, as they often found there wasn't a suitable substitute for a specific scientific word. By the end of Year 8, students in the study demonstrated knowledge of literacies required for completion of written assessment tasks in Science, which reflects the dominance of assessment in the Science curriculum. Even though students could identify some of the literacies required in the production

of Science assessment tasks, understanding and application of these literacies was variable and required ongoing development, as was evident in students' assessment responses.

7.1.9 History – A Social Science or SOSE?

Across the school year, Year 8 students are timetabled in SOSE (Studies of Society and the Environment), which is not a discipline in itself, but a generic term used to represent a number of Social Science subjects under one umbrella. SOSE was devised so that in any one year, students would study a range of integrated topics from Social Science disciplines, including History, Geography, and Citizenship/Political studies. The subject was organised around common themes such as Continuity and Change, and Time and Place. With the advent of the Australian Curriculum, there has been a movement back to study of discrete subject areas such as Geography and History, rather than the broader, integrated units of work students were required to study in SOSE. However, by continuing with the nomenclature "SOSE" in the school, there is potential for students to be confused as to what are the literacies of distinct disciplines such as Geography and History. Even though the Year 8 timetable was divided into Geography in the first semester, and History in the second semester, students commonly referred to the emakimono task as a SOSE task, not a History task. For example, when Isabelle was talking about the task she found most challenging during the year, she referred to a Geography report students were required to complete in the first semester about water catchments. As part of the assessment, students went on an excursion to one of the local creeks and compiled field notes, before completing their reports:

> Well, I know for me definitely the most challenging was like the water, um…in SOSE, but the reason it was challenging was because we hadn't actually done a report like that before. And we were just new to high school and everything so that was really hard.

Isabelle refers to the task as a SOSE task. While she can identify the genre as a report, it is important that she recognises it is a Geography report, as distinct from the Science report and History reports she had completed during Term 4. By referring to the Geography Report as a SOSE task, Isabelle signifies she is unable to build knowledge of a significant genre in the discipline of Geography. Isabelle's response reminds us of the challenges students face in their first year of high school, when

they encounter tasks they have not previously been exposed to. As has already been noted in the previous two chapters, the History report was referred to as "the scroll" by students, and by not clearly identifying the genres that students are working in, students' developing knowledge of the disciplines of Geography and History has been significantly undermined.

As demonstrated in their responses concerning Science literacies, students focused on identifying literacies associated with the production of written assessment responses. In the group interview, Connor said that with assessment in the subject, "you kind of have to make it fit the theme". He was referring to the creation of a Japanese scroll, the task for the Shogunate unit. Connor expressed incredulity that students were required to make a scroll:

> we have to make a scroll, like we have to make an actual scroll.

Implicit in this response is that once again, knowledge of a key genre in History – the report genre – is being negated by a focus on the text type of a scroll. Connor continued by considering how the same task would be represented and approached within the other disciplines:

> I think in English we wouldn't have to make a scroll. We'd just have it written on a power point, maybe not even that. Just have it on a word document. We probably wouldn't even need images. You might have to speak in front of a whole class about it, possibly.

Connor believed presentation was an important feature of History, but not English. It is interesting that he sees that images are not important in English, although he had just completed an English assessment task where he was required to analyse visual images. His response also highlights that he sees oral tasks as important in English, but not necessarily in History, which may reflect the emphasis given to written assessment responses in Geography and History during the year. The articulation of differences between subjects allows students to deepen their knowledge and understanding of how specific disciplines create meaning. While Connor's knowledge of differences may have been developed implicitly through exposure to the Year 8 curriculum, he and other students would still benefit from explicit teaching of differences to affirm and extend what they already know implicitly. It is also clearly evident that school decisions regarding something as simple as the

code given to a subject could assist students' understanding of the distinct boundaries between subjects, instead of blurring them.

7.1.10 English – Knowledge about Language

Unlike Science and History, students did not refer to genres and written texts in English, but rather language features of the unit. In the Term 4 unit, knowledge of evaluative language represented both the content knowledge of the unit - along with understanding of indigenous history and perspectives - as well as an important literacy tool students could apply in their own writing. Bridget said in English she had learned:

> Um, well, you use different things like metaphors…and symbolism, and Affect, Judgement and Appreciation.

In her response, Bridget is clearly able to articulate what she has learnt because she has knowledge of a metalanguage that allows her to discuss her learning with specificity. Connor took this one step further, identifying the important literacy of using language to position readers to accept a particular viewpoint:

> In English, you're normally like, trying to persuade someone to think a certain way about a certain topic.

Noah also viewed knowledge of language as important for writers in appealing to their readers:

> Use of evaluative language and other devices makes it (English) more interesting to read and improves your writing capabilities.

Isaac affirmed this view of the importance of reader positioning by saying evaluative language "helped improve our logic, or vocabulary". In this way, Isaac was highlighting that knowledge of evaluative language extended his vocabulary by giving him a language – Affect, Judgement, Appreciation – to talk about language features of other texts. As identified in the *Developmental Trajectory of Writing* (Christie and Derewianka, 2008, Table 1.3), discerning use of evaluative language is an important development in students' writing during adolescence. Students must learn to be selective in its use, dependent on the discipline and genre. Students could benefit from explicit teaching of evaluative language in other subject areas as well, demonstrated in Isaac's Science response when he used evaluative language that was

inappropriate for the genre and task. Students were asked if they felt knowledge of evaluative language could be useful in other subjects:

Isaac: Appreciation could be

Interviewer: Appreciation? In what way?

Isaac: How much you value…

Noah: Images

Isaac: What you're analysing, like a piece of text, or an image or something, like what it actually means to you.

Interviewer: All right. So a subject like…

Isaac: Um…

Connor: SOSE.

Isaac: SOSE, or English…generally English.

Connor: Music.

Isaac: Art.

This demonstrates students can apply their knowledge across disciplines, but it still requires explicit teaching to assist them in recognising the sometimes obvious, sometimes subtle differences between subjects concerning how knowledge of language should be applied. In the study, the main literacy students identified as being important in English was knowledge of evaluative language, both as a content objective and as a skill to be applied in their own writing.

7.1.11 Section Summary

In this section, the disciplinary literacy approach implemented in the school has been reviewed, revealing misalignment between what has been planned and espoused in curriculum and policy documents, and what has been enacted in the classroom. Significant challenges in producing quality assessment were evident in the misalignment between curriculum objectives, assessment task requirements, and students' interview and assessment responses. Although the school has devoted human and financial resources to improving staff knowledge of curriculum literacies and pedagogy, delivery of content is given primacy in the classroom. As a result of the emphasis on content, students view the main differences between subjects as differences between content or topics of study, believing they could improve their assessment responses if they added more information or content. If a disciplinary literacy approach is to be enacted within the school, it requires teachers and students

to have knowledge of and share a metalanguage that allows them to discuss features of texts in specific disciplines. While students in the study were comfortable using the word "metalanguage", this was in reference to content-specific words rather than broader language features of texts. In speaking about metalanguage, students could understand that different content requires different specialised and technical vocabulary that must be applied in the texts they construct. Individual students could start to identify important curriculum literacies within each domain, such as practical investigations and reports being key genres in Science, where specific details of concepts and phenomena must be described and evaluated. The lack of clear demarcation of subjects Geography and History, rather than SOSE, can serve to confuse students and hinder the development of knowledge specific to both domains. In English, students began to understand the how authors use language to represent people, places and things, and attempted to replicate that in their own writing. While students recognised that the texts of the disciplines may be structured in different ways, they have had little exposure to how language is used within subjects to represent knowledge. As the domains become increasingly complex and specialised, knowledge of language is a literacy that must be developed in all subject areas if students are to succeed, and is an area for future examination.

7.2 The Demands of Changing Subjects

In supporting a disciplinary literacy approach to learning in high school, school systems and teachers cannot assume that students can readily develop knowledge and understanding of key curriculum literacies in multiple subjects at the same time (Billman & Pearson, 2013; Buehl, 2011). Despite students' assurances that it "comes naturally" to change subjects four times a day, their interview and assessment responses highlight the challenges of cueing into the thinking, listening, reading, viewing and writing required for successful navigation of different subject domains. As students switch between subjects during the day, and at the end of trimesters in the school, they are engaged in "continuous cycles of constructing, de-constructing, re-constructing and communicating meaning" (Cambourne 2013, p. 12). Students' expressions of ease in changing subjects four times a day reflected their appreciation for a timetable that allowed them to forward-plan what they would be doing at given times during a school day. This was in contrast to primary school, where students referred to a switch between subjects being signified by a teacher

asking them to take a particular book out of their tidy trays, with Isaac commenting it would "take a bit until you figured out what you were doing." Thus, on any given day during their primary schooling years, students would not necessarily know in advance the subjects to be taught that day. While students felt the fragmenting of the high school timetable into distinct "subject matter bites" (Moje, 2007, p. 3), assisted them in preparing the correct equipment for classes in advance, classroom observations and students' interview and assessment responses indicated it would also "take a bit" for students to "figure out" classroom and assessment demands in specific subjects. Students' abilities to comprehend and manage the multiple demands of multiple classrooms was dependent upon their abilities to engage as members of specific subjects and learning communities.

7.2.1 Students' Identities as Learners in the Disciplines

As students engage in the learning of different subjects, they become members of distinct discourse communities with their own ways of thinking, acting, being and doing. While there might be common ways of acting and thinking as a member of a particular subject – for example, a student of English – there are also subtle differences in the discourses of classroom spaces belonging to different teachers within a discipline. As participants in the distinct discourses of different subjects and classrooms, students "enact particular identities; at least at some level" (Moje, 2008, p. 101), as demonstrated in the study when students completed their reading and writing profiles (Chapter 5). As students take up new subjects and discourse communities, they need to incorporate already established identities as "all kinds of different" readers and writers within disciplines (Buehl, 2011, p. 13). Thus, when students take up new subjects and discourse communities, their success is in part dependent upon identities they have already developed as readers and writers, and how fixed they view their abilities. For example, the students in the study who demonstrated the broadest profiles were those who identified as struggling or 'slow' leaners – Simone and James. Simone and James demonstrated they were highly confident in reading and writing in elective subjects where practical activities dominated, such as Home Economics and Health and Physical Education for Simone, and Business Education and Art for James. However, both Simone and James identified that they struggled with the reading and writing demands of the core subjects of English, Mathematics, Science, History and Geography. As learners,

Simone and James' struggles with reading and writing in the core subjects has not only impacted on their confidence, but their ability to envision any future success in those subjects. In describing Maths as "too complex for my little brain", Simone demonstrates a belief that she will never achieve success in Maths – she believes being successful in Maths is beyond her capabilities. James said he found English the most challenging subject because of the language, and believed it would help if he "actually asked the teacher more often what I'm supposed to do." James' response indicates he believes he cannot understand learning demands without teacher explanation and guidance, thus he is not confident he has the ability to decipher learning demands on his own. James and Simone, with their distinct learning profiles, demonstrate that in any one class, there is not one learner "in one context, making meaning of one text" (Moje, Dillon & O'Brien, 2000, p. 166), but an array of learners with a range of profiles. These multiple identities exhibited by multiple learners "matter a great deal" in students' willingness and abilities to meet the literacy demands of specific content domains (Buehl, 2011, p. 7).

As learners enact their identities within specific disciplines, they encounter significant demands in switching between various semiotic systems and resources including different modes of communication, different forms of interaction with teachers and other students, and different classroom contexts. Students' abilities to manage "classroom pacing and cueing" are 'critical factors" in successful completion of both classroom and incremental learning (Wyatt-Smith & Cummings, 2003, p. 51). Students' interview responses revealed some of the struggles they encounter when trying to manage the demands of "responding appropriately", when required (Wyatt-Smith & Cummings, 2003, p. 50). Simone alluded to the constant struggles she faced when assumptions were made concerning prior knowledge: "Teachers are like, you should already know this". Both Simone and James suggested constant "recapping" enabled them to cue into learning when new knowledge was presented, highlighting the importance in activating background knowledge if students are to develop their learning in the disciplines (Buehl, 2011). Simone said teachers could "work together more" with students, highlighting that joint construction of texts assisted her in cueing into assessment demands and expectations. James believed having more time to spend on tasks assisted him in successfully complying with learning demands, because time pressure:

> pretty much sends me into a mental blank, where I can't think of anything and I'm trying to rush through it.

James elaborated further, saying "more study time, or practices" would help him. The impact of time constraints were highlighted by Wyatt-Smith & Cummings (2003) in their study of senior classrooms in Queensland high schools, noting "minimal leeway" in pacing, with the curriculum "at fault" (p. 23). Noah, in explaining why he experienced difficulty understanding Appreciation in English, highlighted the challenge he found in simultaneously cueing into different modes of communication:

> I didn't really understand…if I was busy writing it…writing something down and she (the teacher) said, "this is how you do it", I'm really trying to think…like, what I was writing then. And I asked her, do you…like explain the last bit, but she said you should have been listening. It's really hard in class to think because everyone's talking.

Noah indicates he is trying to make sense of what he is copying, as he listens to the teacher further explain the information or give directions, while trying to block out the background noise of other students talking. Although it might seem that he has not been listening, he is indicating he struggles to manage switching between a number of semiotic codes simultaneously, and thus finds it difficult to make sense of what he is supposed to be learning. Noah's response demonstrates the combinations of semiotic systems that might be operating in the classroom at any given time which students are expected to manage, often without explicit instruction in how to do so (Wyatt-Smith & Cummings, 2003).

Students in the study could identify the explicit literacy cues that enabled them to both manage the multiple semiotic systems of the classroom as well as deepen their knowledge of specific disciplines. Bridget said what assisted her in her learning was "looking at examples and writing". Isabelle also valued visual examples and demonstrations:

> I like visual, I don't like being told like power points and stuff, like just show what we have to do. Like, just being said "Affect language is this", like it's in my mind, but it doesn't stick as like…as like yeah…the visual aspect.

Isabelle highlights that cueing into new information she has copied from power point slides requires consolidation of her understanding through examples of how new knowledge can be applied. Lisa struggled to cue into learning at home:

> I don't know…I guess I like doing other stuff and then sometimes I don't really get what to do, so, it's kind of annoying, like, you bring it back, then take it home again.

Lisa implied she sometimes needed clarification and explanation of tasks, and became frustrated if she had to wait for confirmation until she returned to school. Isaac could see the benefits of group work in cueing students into new perspectives on a topic or concept, but also found it distracting:

> I sort of like to be independent when I'm doing my stuff, 'cos I find in different groups it's good to be in different groups, 'cos they can give you ideas that you didn't think of. And you're like, "Oh, how did I not think of that?" But I find when you're in groups, stuff just gets too confusing and rowdy and stuff.

Like Noah, Isaac indicates he is distracted by multiple semiotic systems operating in the classroom simultaneously, such as occurs in group work when students are required to listen, speak, view, perhaps read and write – all at the same time. The array of student responses reinforces how at any one time in any classrooms, there a range of learners, who demonstrate range of learning styles, and teachers must take account of these differences when developing programs of learning.

7.2.2 The Impact of Limited Time

One of the most significant factors inhibiting students in their abilities to manage the semiotic switching that occurs within and across the school year is time. Before the school year begins, dedicated subject time is lost to an endless array of sports days, career education days, vaccinations, subject selection talks, school photographs…all valid activities, but these activities further reduce the limited time teachers perceive they have to address planned curriculum goals. Reporting deadlines drive assessment schedules: assess too early, and students have not been given enough time to acquire the knowledge and skills that are being assessed; assess too late, and teachers will not be able to meet reporting deadlines. Although subject teachers try to set assessment dates as close as possible to reporting deadlines, to allow students opportunities to maximise learning, assessment demands result in

multiple assessment tasks being due simultaneously. Students in the study such as Bridget explicitly emphasised that assessment was not the issue, but that too many tasks due at the one time did exacerbate the pressure students felt. Time constraints also impacted on the pace of lessons, as acknowledged by James who referred to the "mental blank" he experienced if work was rushed. In the subjects of Science and History in particular, the demands of the C2C assessment tasks compounded time pressures felt by teachers and students in the classroom, as teachers tried to cover the content students needed to successfully complete assessment tasks but in significantly less time than was planned. As soon as the assessment for one unit is completed, preparation for planned assessment in the next unit begins, and the switching that occurs between and within different discourse communities continues for students, in increasing complexity. In the cycle of continuous learning and assessment, there is little time for reflection and review, but time must be devoted to these "two Rs" if students' literacy capabilities are to continue to develop.

7.2.3 Section Summary

Although students seem to physically manage shifting between subjects within a school day and across school trimesters when elective subjects change, significant challenges are encountered in adapting to the reading, writing and thinking required for different disciplines. Students in the study appreciated a timetable that gives them the ability to plan ahead for correct equipment and learning, compared to primary school where they were often not aware of what subject might be studied on any given day. As members of different discourse communities in different disciplines, students enact identities as readers and writers that shape their willingness and abilities to meet the literacy demands of different subjects. Throughout a school day, students are required to manage multiple shifts between multiple subjects, with multiple learners and multiple semiotic systems. By the end of Year 8, students are able to identify what assists them in cueing in to classroom learning. In the management of competing subject and extra-curricular demands, significant pressure is placed upon the timetable which results in less time for planned units and increasing pace in the delivery of content. The continuous cycle of learning and assessment leaves limited time for reflection and review, which are necessities if there is a commitment to a disciplinary literacy approach within a school.

7.3 Valuing Writing

"Writing is a significant language and literacy skill that is essential to students' academic success in school" (Fang & Wang, 2011, p. 147). However, the current school environment of a crowded curriculum, implementation of the Australian curriculum, and the normal array of school interruptions means teachers and students are feeling the pressure of lack of time. When decisions have to be made about what needs to be prioritised in students' learning to meet assessment demands, content invariably wins out over writing. This is despite the fact that writing is the mode most students are assessed in across all subjects (Freebody, 2013b). The emphasis on content presupposes the belief that if you concentrate on the "what", students will implicitly know how to complete the "how" (Cambourne, 2013). As students' responses in the domains of Science, History and English demonstrate, they have struggled to represent the knowledge that was deemed so important for them to know. Despite lack of opportunity for explicit teaching of writing in those subjects, the limited attention to writing during the study made a difference to the responses of some students, highlighting they do require explicit guidance regarding the organisation of representation of information in texts.

7.3.1 Preparation for Writing

It is evident from students' responses that they see the major improvement in their writing resulting from a deeper study of a topic, hence more extensive content knowledge. Students' struggles in constructing their assessment responses highlights "a common misconception guiding much teaching and research, that there is a direct, accessible and already known connection between the knowledge acquired and displayed in classroom interactions, and the knowledge needed to display knowledge in the writing of texts for assessment" (Freebody, 2013, p. 65). In the group interview, when students were asked to consider what helped prepare them for written assessment, the following exchange occurred:

Connor:	You mean studying?
Isabelle:	Connor doesn't study.
James:	I study sometimes.
Connor:	Study?
Isaac:	Of all people Simone doesn't study.
Noah:	You study to get As.

Students' immediate responses concerning effective assessment preparation was to "study", with students like Connor saying they did not study. In Noah's response, he associated study with success in learning, although it is not entirely clear what types of activities are encompassed by the word "study". James said he did "just a bit of study, I just do a small amount of study", where it seems that study is something students view as work at home, or at least beyond the classroom. This was evident when Connor said he didn't study, unless it was in class time. Students' vagueness concerning study and the lack of specific references to writing implies they did not really know what to do to prepare for assessment, or draft a response. As already discussed, students see major improvements in writing coming from the addition of more content, reflecting what is emphasised in class. This suggests they may lack knowledge of the tools to assist them in writing in the disciplines, or perhaps they lack knowledge of language that would enable them to discuss specific features of writing.

7.3.2 The Challenge of Writing

The high school environment presents challenges to students in developing subject-specific literacies, particularly in terms of assessment requirements, as well as time. When questioned about challenges they encountered in writing, students referred to both the structure and language of specific types of writing as challenging. This was evident in the following exchange during the group interview:

Isaac: Probably writing like the actual format.

Noah: In Primary, you were basically allowed to do whatever layout and stuff.

Isaac: In Science we could say: "The following report contains like…", and the teacher told us to do that. And this year, we're always having to find new ways of explaining our information and stuff to give the best clarity and stuff.

Connor: What we thought was right wasn't right.

Noah's response shows in Year 8, students are beginning to learn there are specific ways of organising information that are expected in each subject. Isaac's response highlights that there is also greater consideration and sophistication of language usage expected, building upon knowledge students have already developed during primary school. It is interesting to note Connor's assertion that there are right and

wrong ways of using language, rather than recognising that there is perhaps greater sophistication required as students progress through school. It also reflects that literacy demands increase, as does the complexity of the types of texts students are expected to produce, as they progress through high school (Freebody, 2013b). These literacy demands are realised in the production of knowledge in academic genres of each discipline which differ significantly from students' daily interactions and language use (Fang & Wang, 2011). When students are exposed to 13 different subjects across the year, each with its own expectations regarding how texts are constructed, they face significant challenges in not only completing assessment, but developing knowledge of writing in each subject. Unfortunately, "schools do not do a good job of teaching this complex skill (Moje, 2008, p. 879).

7.3.3 Writing – What Helps?

The learners involved in the study were not only able to identify the challenges faced in completing specific written tasks, but actions in the classroom that assisted them in improving their understanding and completion of assessment. The key actions identified by students in expanding their knowledge of writing in specific subjects were use of exemplars, scaffolding, one-on-one teacher assistance in class, teacher feedback and repeated writing practice. During the group interview, students agreed exemplars "helped a lot" (Tom) with Noah valuing exemplars "because you can change it towards your words and improve on it." This was supported in student responses given during the individual interviews, with only one student, Lisa, saying she didn't use exemplars because as a learner, she just "wanted to get it done." Without the exemplar in Science, students would not have been able to conceptualise what a scientific report looked like, and in History, from teaching of the exemplar, some students were able to discern how to improve paragraph structure, particularly linking topic sentences to focus questions. Students accessed two exemplars in English, and with repeated writing practice, had the opportunity to develop their skills in the salient language features identified in the exemplar. The importance of having exemplars cannot be underestimated, but they must be used to explicitly demonstrate the utilisation of language to structure and represent information within the genre, otherwise students may derive little meaning from their use. The use of exemplars within disciplines is an area of potential future research,

to determine how students use them in the construction of their assessment responses.

The use of scaffolding was integral to students' understanding and completion of their written assessment in all three subjects: English, History and Science. Scaffolding is "the temporary instructional supports that guide students in their thinking as they build competency" (Buehl, 2011, p. 29). In English, when asked what helped her to organise information, Lisa said, "Oh, we did the sheet…thing, yeah. " Tom was more specific, referring to the Text Analysis sheet, which "made it a lot easier. I got to set everything out, and…like, all the words, like…yeah, so I could get all the paragraphs that I needed to put." In English, the scaffold not only served to highlight to students what was important, and what they needed to make notes about, but also assisted them in organising their paragraphs as well. Due to time restrictions, there was little evidence of scaffolding across History and Science to assist in the development of students' understandings of concepts and language proficiency. There was no time to revise concepts learnt, and there was no time to practise writing, apart from receiving feedback on one written draft. The minimal number of lessons devoted to writing in both these subjects limited the scaffolding that could be provided to students in their writing, with no opportunity for joint construction and independent practice. It must also be acknowledged that while the scaffolding on the Science task allowed them to locate information required to complete the task, it also impeded their understanding of what a cohesive response should look like, with the scaffolding removed. English allowed for effective scaffolding through use of exemplars, joint constructions with the teacher, and opportunities for practice responses. However, the scaffolding, while considerably more extensive than in Science and History, did not provide effective preparation for the assessment task because of marked differences between the texts studied in class, and the text used for the assessment response. To be fully prepared for the literary response, it would also have benefitted students to be exposed to scaffolded activities in understanding visual language and grammar. Without appropriate "instructional scaffolds" (Buehl, 2011, p. 29), students in the study ended up writing assessment responses to meet deadlines, without understanding significant aspects of how each discipline represents knowledge. Students have been "doing

school" (Wyatt-Cumming & Smith, 2003), without developing deeper knowledge of curriculum literacies with specific disciplines.

In both Science and History, an important subject literacy is documenting and acknowledging research sources, and this was emphasised in both tasks with the requirement of research journals. All students were able to articulate the importance of accessing a wide range of sources, documenting their sources accurately, putting information in their own words, and acknowledging sources, including visual sources. When asked what helped her organise information in the History, Simone responded:

> The…what is it called? The one…the one with the bibliography and then you write dot points you find on your sites …research journal?

For Noah, the value of the research journal was "Um, to give you notes…get greater notes from the internet and to help you just expand on it and justify." The primacy of content is evident in Noah's response where he implies the "greater notes" or more information he is able to locate, the better his response. While Noah understands he has to "expand" on information and "justify" his statements, his assessment response indicated he struggled to use language effectively to represent knowledge of the shogun he chose to research. The Research Journal scaffold allowed students to organise their information under key focus questions, which made the process of paragraph writing much easier. Connor spoke about copying and pasting from his research journal into power point slides for his scroll, and "modifying it a little if it needed to be smaller or bigger." The importance of the research journal in the research process was reinforced by the teacher during the lesson where the task was handed out. In a computer lesson, students were directed to go to the Research Journal Template, where the teacher asked students what the purpose of a research journal might be:

> Student: So you don't have to go back and locate resources you've already used.

While students could recognize the value of effectively maintaining a research journal, a number of them required repeated reminders to ensure they recorded sources accurately. Plagiarism was discussed, and the teacher closed the lesson by saying:

> I strongly urge you to use the research template. It has all the information you need.

The importance of referencing of sources and attribution was also reinforced after the students handed in their drafts, with the History teacher conducting another lesson concerning referencing of digital texts and books, particularly the need to access a wide range of sources. In Science, the importance of research was reflected in the research scaffold provided on the task sheet, emphasised during research lessons as well. However, not all students realised that Part B of the task sheet was the research journal, with Lisa saying she did not use the research journal or scaffold; instead she said she just followed the task sheet and "Parts A, B and C." All students, except for Lisa, said they used the research journal provided on the task sheet.

All students spoke of teacher assistance as being valuable in their completion of assessment. Isabelle spoke in general about the importance of listening to teachers. James and Simone, who identified themselves as struggling learners, recounted the help they had received from teachers. Simone spoke about the help she received from her Science teacher, and James, who had teacher aide assistance, highlighted teacher support as being integral to his success:

> Well, pretty much the way the teachers help me with my work, and…well, how they told me to put the words into a proper sentence, yeah.

When asked what they thought teachers could do to help students in the classroom, two of the students – Connor and Isaac – spoke about the challenge for teachers in assisting a range of learners with a range of needs:

> Um, I really don't know. I think they do a pretty good job as it is, but, there's like…there's usually about 20 people in the classroom, so you can't like you have to go to everyone, 'cos everyone wants to get…like…teacher feedback and all that. It does get a bit strenuous at times, but I don't know…I think…yeah, just that. (Isaac)

In his response, Isaac reinforces the importance of teacher feedback to individual students, and how that might be difficult to achieve with the number of students in the class and limited time. Connor spoke about the difficulty of sometimes accessing teachers for individual assistance:

> I think if more…staff aide? If aide staff I think….whatever they are called…I'm not sure. I think a few more of those would be good to help

> around the classroom, because usually there's only one teacher and that…she has to take care or he has to take care of like twenty-odd students and help all of them and sometimes some person needs a lot of help so they're…she's or he's occupied for quite a while. If you're lucky there are two teachers, but they can both be occupied at the same time. You kind of have to figure it out yourself.

Connor signifies that he recognises the time pressure and curriculum demands teachers have to contend with. Again, this is the reality of schooling: classes of "twenty-odd" students exemplifying a range of learning needs and styles; and moments when students are left to "figure it out for themselves". This is what students in Science were expected to do, before an exemplar was produced; and what students in History were expected to do, with a C2C modelled response that provided no detail of how to construct the task. This reflects a content literacy approach, where students are expected to know what to do with the content when it has been delivered (Cambourne, 2013). An important element in developing students' knowledge of curriculum literacies is feedback concerning not only what they can improve as individual students, but also how they can improve their writing, with explicit instruction in how students should compose and comprehend texts.

One clear finding to emerge was that students valued repeated opportunities to practise their writing in English, to assist with preparation of their English assessment. Simone said she felt a lot more confident with her English assessment than History or Science, "because we did a lot more on it as a class." She appreciated the opportunity for modelled and guided writing, where the teacher would create a response with student input, as well as independent practice:

> Well, we did lots of practices and like occasionally she would do it with us.

Despite repeated practices, all students found the text they had to analyse quite challenging, as well as completing the task in two 70-minute lessons. Two students, Isabelle and Isaac, expressed disappointment in their results, considering they felt confident in their writing through repeated practices. Isaac felt pressured by time, as he said he was absent during the lesson when the students received the task. Isabelle said she "felt really good, 'cause I had a lot of practice, like I had a lot of knowledge about the Stolen Generation and about the colonisation of Australia." However, after receiving her result, Isabelle said, "I guess it probably wasn't very good," saying she

could have used more examples to justify her judgments about the text. Despite feeling confident about the tasks, student anxiety was heightened due to the pressure of analysing and responding to the text in two lessons, and responding to a picture book, when most of their practices had concerned responses to songs or poems. Time became a compounding factor when students struggled to make meaning the text, particularly finding examples of evaluative language. This example highlights that assessment tasks must be effectively designed to ensure students have opportunity to demonstrate their learning, and if they are to develop confidence in a key literacy in the English curriculum – analysing and responding to texts.

7.3.4 Section Summary

This section explored the place of writing in the high school curriculum. It demonstrated there is an emphasis on content in the belief that once students learn the knowledge, they will implicitly know how to present it in ways that are privileged in specific disciplines. Students' responses highlighted they view studying and learning content as important preparation for assessment, with little consideration of the potential benefits of writing instruction. Students find writing challenge in Year 8 in terms of knowing what is required for a task, and how to structure a response. In preparation for assessment, students value the use of exemplars, scaffolding, teacher assistance and feedback, and repeated practice in writing. Their writing performance suffers without this practice.

7.4 Enacting a Disciplinary Literacy Approach

While the study did not achieve its aim of enacting a disciplinary literacy approach across three high school subjects, the struggles that students demonstrated in acquiring knowledge and completing assessment indicate that it is worth further exploration and research. Students developed some understandings of subject content, but there were significant gaps as well, evident in Science when students said they couldn't understand some of the terms they wrote in their assessment pieces; and in English, when only one student correctly identified the evaluative language technique of Appreciation in their assessment response. Students developed some understandings of significant literacies within each discipline, such as the inclusion of precise details when writing practical reports in Science; the importance of human agency in History when examining the impact of a person's

life; and how authors use words to construct meaning in literary texts in English. Students developed some understanding of the differences between subjects in terms of language, acknowledging that fields of knowledge require use of technical and specialised vocabulary related to the topic of study. Students developed some understandings of archetypal texts within the three genres, and how to organise and structure those texts; however, this knowledge focused on the textual function of language, mainly paragraph structure and organisation. There was little opportunity for students to demonstrate their understanding of how language can be used within specific disciplines to organise and represent information. The content knowledge approach has had little impact on the development of student knowledge in a range of literacies within specific domains. Thus the content knowledge approach, exemplified in the study, has demonstrated that it has had little impact on student knowledge concerning how disciplines represent the world.

The disciplinary literacy approach to the teaching of subjects in secondary schools supports a "more complex view of literacy instruction that addresses the literacy demands specific to content areas" (Johnson & Watson, 2011, p. 101). Central to this approach to secondary teaching is that belief that "disciplines differ not only in content, but also in the ways this content is produced, communicated and critiqued" (Fang, 2012a, p. 19). A disciplinary literacy approach means restructuring of the curriculum to ensure there is "simultaneous engagement with disciplinary language and disciplinary content" (Fang, 2012a, p. 19). The teachers involved in the project have undertaken professional development in disciplinary literacy in recent years. However, they have no opportunity to enact the knowledge they have gained if schools implement a curriculum that emphasises "how knowledge is produced rather than producing knowledge in the disciplines" (Moje, 2008, p, 97). The focus should not just be on content, but on how that content is represented within disciplines and how insiders within the discipline make meaning of the content. It is evident from the struggles students encountered in not only understanding content, but in constructing assessment responses, that current pedagogical processes are not working for students in the classroom. Students are completing assessment, but not developing the deep knowledge of disciplines that allows them to think like a scientist or a historian. It should be clear from students' texts and the literacies they have begun to recognise in subjects that "literacy

practices vary across the curriculum, and that these practices are best learned and taught within each discipline" (Fang, 2012a, p. 19)

7.5. Limitations of the Study

The limitations of the study are obvious and provide insight into the current context of schooling. The main limitations were the external and internal constraints that impacted on the design of the project, and the reluctance of all learners in the class to consent to participation. While these factors may have impacted on the project design, they should not be viewed as anomalies but rather as factors that are replicated in many schools across the state.

7.5.1 External and Internal Constraints

As researcher, my aim in the project was to demonstrate, by working with teachers, how explicit teaching of writing could be incorporated within disciplines. From this, I hoped to provide other members of staff with an example of how knowledge of language within disciplines could enhance student writing in the specific texts they were required to construct for assessment. While I knew that Science and History were implementing the Australian Curriculum through C2C units, I did not have direct experience of implementing the units until the research project began. Even though the time devoted to writing was minimal in both Science and History, I appreciated the significant pressure both teachers were under to deliver units of work and complete assessment in such compacted time frames. I could not fathom how students in both subjects could learn new content and develop understandings of key genres in both disciplines, as well as construct texts of their own, all within 10 – 12 lessons. This is not uncommon in schools, however, and is indicative of significant external and internal constraints that impinge upon teaching and learning.

7.5.2 External Constraints

The fluidity of the high school curriculum in recent years is a result of the implementation of the Australian curriculum in the subjects of English, Mathematics, Science and History. Queensland was one of the first states to adopt the curriculum in 2012. Queensland's response was to develop curriculum materials from Prep to Year 10 called Curriculum to Classroom (C2C) to reflect national curriculum goals

and guidelines. While C2C units represent an interpretation of the Australian curriculum, many staff view them as a rigid set of units that have to be adopted in their entirety, or otherwise the curriculum will not be covered. In the early phases of implementation, there was concern that the C2C materials were not optional, but mandated in state schools. The assessment tasks attached to the C2C units were developed by writers of the units of work, as assessment under National Curriculum guidelines is the responsibility of state education authorities. In the initial phases of implementation, there has been ongoing change in schools in subject content and assessment as C2C units have been revised, with teachers attempting to enact these units in a range of school settings, for a range of learners.

In recent submissions to the 2014 review of the Australian Curriculum, the major criticism of the curriculum is density of content in all year levels, as well as the appropriateness of the content specified for particular age levels (APA 2014, ISQ 2014). Common areas of concern expressed by various state and national education interest groups include content in all learning areas that is too ambitious and complex for specified target levels, overcrowding of the curriculum, and not enough emphasis on the development of numeracy and literacy skills. In History and Science there is greater specificity of content than in English, as topics of study are named. The same criticisms of the Australian Curriculum are being made of the C2C units, and what has been reflected in this school context has unfortunately become the norm in a number of Queensland state schools. In the study, despite the Australian Curriculum Literacy as a General Capability being referred to in both Science and History units, it was not evident in any of the resources beyond "Metalanguage" sheets listing topic words for the unit. While it is a school decision to use the C2C materials, the decision by Queensland state education authorities that they would be one of the early adopters of the curriculum placed significant pressure on schools in 2011 to implement the curriculum across two subjects initially, in three year levels simultaneously. The density of content in both the Australian Curriculum and the C2C materials dictates a content literacy approach, and as is evident from the students in the study, it is resulting in significant gaps in their knowledge across the disciplines. While teachers in Queensland state schools do not have a choice as to whether to adopt the Australian curriculum or not, they do have a choice as to whether they implement the C2C units. If student learning and outcomes are the core

business of all schools, then teachers need to return to the national curriculum documents and interpret them in the context of specific school settings with specific learners, rather than use units and assessment tasks that are variable in their quality and intent, and do not lead to discernible improvement in student knowledge across the disciplines.

7.5.3 Internal Constraints.

In schools, the structures of time and place "shape how subject areas are used and how knowledge gets constructed within them" (Moje, 2008, p. 99). The fact that in high schools subjects are divided into separate domains implies that knowledge within subjects is "inherently different" (Moje, 2008, 99). While subjects may be considered to be inherently different, they are not regarded as of equal importance, reflected in time allocations apportioned to each subject area. In allocation of time, schools use Queensland Curriculum and Assessment Authority (QCAA) and National Curriculum guidelines to create timetables where students have opportunities to experience a range of subjects. These timetables, while they serve to give each subject a space, carve up subjects into chunks of time, some less than others. Thus, while timetables serve to provide structure, they may impede student learning by compartmentalising student learning into segments of the day, where students do find it difficult to manage the shifts in learning that have to occur when they move from subject to subject (Freebody, 2007).

Schools make decisions concerning what to assess and when to assess, guided by state education authorities such as the QCAA. The design of all three tasks in the research project could have been improved to enhance student learning. The Science task, adopted from the C2C unit, was complex, a challenge to read, let alone to complete. It demanded of students a list of skills so numerous and broad, that students could never hope to do justice to all of them. The History task, like the Science task, did not emphasise the report genre – a key genre in both the Science and History disciplines – and students viewed the task as a scroll they would perhaps complete once in their schooling, rather than a genre they would expand their knowledge of through repeated practice as they progressed through each year level. It was the choice of the Science and History faculties at the school to implement the C2C units and use the C2C assessment tasks; the units and tasks could have been

amended to more accurately reflect the context of the learners. The English task, a school-designed task of a literary response, could have given students greater direction concerning how they were to respond to the task. The main issue with the English task, though, was that it could have linked more effectively to the learning experiences conducted in class, particularly the texts studied. The time allocated to units was also driven by school reporting and assessment deadlines. In a ten-week term, assessment had to be completed by Week 8 to allow reporting by Week 9. In subjects like Science and History which have less contact hours than Maths and English, this further compounds the reduction of time. Schools have the power to construct and conduct assessment, and need to continually review practices to ensure that students are not being assessed for assessment's sake, and that they are being assessed on what they have learned.

7.5.4 Participation of Learners

The small number of learners who consented to full participation in the project could have been a limitation in the project, in that there was no opportunity for further selection of participants to occur when it came to the individual interviews, as was originally planned. However, the eight students who did provide full consent proved to be insightful and engaging young people who deserve better from education authorities and their school. A review of students' results in Chapter 4, their profiles in Chapter 5, and assessment responses in Chapter 6 demonstrates they exhibited a range of strengths and weaknesses and learning needs. An analysis of each students' work highlights the potential they have to progress in their writing if there was explicit teaching of language features they struggle with individually, and as a larger group. There is evidence in students' responses that when textual and language features of texts are made obvious to them, they can apply this knowledge to their own work, even if it is only in small ways initially.

7.5.5 Section Summary

Despite the external and internal factors that impinged upon the project's design, it is still valuable in providing an understanding of the current context of secondary schooling, and the curriculum structures and approaches that are hindering student learning. The reluctance of learners to be involved in the research project could have been a limitation; however, those students who did consent to

participation provided discerning evaluations of the learning activities and assessment tasks that had been designed for them. As such, they provide teachers and the school with rich data from which future changes in curriculum structure, design and approaches should be enacted.

7.6 Future Research Potential

Where to start? There are significant implications for future research in high schools, classrooms and educational communities derived from the research project and the adaptations that had to be made to the research design in consideration of the specific school context. The project did not achieve its main goal of demonstrating how explicit teaching of writing in a number of subjects simultaneously could enhance student learning, due largely to internal and external constraints that impacted on the project's design. Therefore, it could be replicated in an environment that not only espouses disciplinary literacy, but creates conditions that allows it to be adopted in classrooms. There is potential for further projects in the application of functional language analysis in the classroom, and in how teachers could use it to assess students' writing and monitor their development. This could perhaps focus on both the teacher and the student, and how disciplinary knowledge is developed and progressed by both groups in classroom interactions. There is also potential for tracking students across year levels, to determine their writing development as they progress through their schooling. What the study has revealed is that student voices are important, and there could be further research conducted from the point of view of students. The teaching of a key genre such as a scientific report in specific year levels could assist in understanding how knowledge is built within domains from junior to senior year levels. Research could also expand to broader educational communities and consider how the Australian curriculum and C2C units are impacting on the teaching profession and learners. Any of these potential research activities can only serve to enhance areas of knowledge that are presently lacking.

7.7 Conclusion

The study provided little opportunity for the explicit teaching of writing, and thus cannot effectively contribute to the body of research concerning improvement in student writing. While it demonstrates that some students can respond to guidance concerning how to organise and represent information, it cannot demonstrate that

there have been discernible improvements in students' control of writing, and that students' knowledge of specific curriculum literacies in writing has been further developed. Students are aware that different disciplines privilege different genres, but they do not necessarily understand why this is the case, and how to further extend their knowledge of these text-types. Students value exemplars, teacher feedback and assistance and modelled and guided writing when preparing for assessment. They also value the opportunity to practise their writing, and feel confident when they do. Due to the limits of this study, there is great potential for further exploration of how students' knowledge of writing in the domains can be advanced

If the study serves the purpose of highlighting what NOT to do in schools, then it will have effectively demonstrated that there is inadequate attention given to the development of writing in secondary schools. If the experiences of the students in this study are reflective of the experiences of students elsewhere, then there are a number of students in our schools whose needs are not being served by the education designed for them. Student learning outcomes are largely assessed and determined by their writing capabilities, but this is not being prioritised in schools. More than that, writing is not being prioritised within disciplines, especially consideration of the particular and distinct ways in which information is represented in specific domains. Education authorities and schools must consider how current curriculum designs and school structures support and constrain student curriculum knowledge and writing capabilities. As is demonstrated in the study, students need explicit teaching in writing if they are to advance in their learning. We owe it to students like Simone, Isaac, Isabelle and James to do more to advance their writing capabilities and knowledge of the disciplines they are working within.

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Appendices

Appendix 1: *Observational protocol*

Lesson Observation		
Setting		
Subject		
Week		
Lesson & Time		
Unit of study		
Context – eg consideration of content of previous lesson		
Lesson aim/purpose		
Activity under observation		
Length of observation		
Observer		
Time	Description of Activity	Reflective Notes

Appendix 2: *Interview Protocol – At the beginning of the study*

Student Interviews	
Date	
Time of Interview	
Place	
Interviewer	
Interviewees	
Description of setting – where students are sitting in relation to the interviewer	
Before the interview:	Describe the project. Remind students of the • Purpose of the study • Who is being interviewed and why • What will be done with the data • How long the interview will take • Confidentiality • Thank them at the end of the interview

Interview Questions:

1. How do you manage changing subjects four times each day?
   - Do you find it easy or difficult (explain further if you can)
2. What is different about the reading and writing you do in Science compared to other subjects?
3. What is different about the reading and writing you do in English, compared to other subjects?
4. What is different about the reading and writing you do in SOSE, compared to other subjects?
5. What is different about the reading and writing you do in Mathematics, compared to other subjects?
6. Which subject do you find the most challenging? Why?
7. Which subject do you find the most enjoyable? Why"
8. What type of activities help you to prepare for written assessment in your subjects?

Appendix 3 – *Open-ended questions (given to students prior to interviews*

To make our interview time more effective, it would be good if you could think about your responses to the questions listed below. Jot down some ideas if you like.

1. How do you manage changing subjects four times each day? Do you find it easy or difficult?

2. What is different about the reading and writing you do in Science compared to other subjects?

3. What is different about the reading and writing you do in English, compared to other subjects?

4. What is different about the reading and writing you do in SOSE, compared to other subjects?

5. What is different about the reading and writing you do in Mathematics, compared to other subjects?

6. Which subject do you find the most challenging? Why?

7. Which subject do you find the most enjoyable? Why”

8. What type of activities help you to prepare for written assessment in your subjects?

9. What has been most challenging about completing written assessment this year? Perhaps think of one task you found difficult to complete, and explain why you struggled.

What is your profile as a reader in each of the disciplines you study? For each subject, place a X in the appropriate box that best describes your reading in that subject.

	English	Maths	Science	History	Geography	H & PE	Art	Home Economics	Music	ITD	Agricultural Science	LOTE	Business Studies
Highly Confident													
Generally Competent													
Can Get By													
Sometimes struggle													
Often struggle													
Only do it if I have to													
Avoid if I can, even if required to read													

At home I read books for enjoyment (hard copies)	Y	N		E-books/web books	y	N		
At home I only read if I have been directed to for homework	Y	N						
I read magazines (hard copies)		Y	N	Online magazines		Y	N	
I read newspapers (hard copies)	Y	N		Online newspapers	y	N		

What is your profile as a writer in each of the disciplines you study? ? For each subject, place a X in the appropriate box that best describes your writing in that subject.

	English	Maths	Science	History	Geography	H & PE	Home Economics	ITD	Music	LOTE	Business Studies
Highly Confident											
Generally Competent											
Can Generally understand enough to pass											
Sometimes struggle											
Often struggle											

Appendix 4: *Interview Protocol– At the end of the study*

Student Interviews	
Date	
Time of Interview	
Place	
Interviewer	
Interviewees	
Description of setting – where students are sitting in relation to the interviewer	
Before the interview:	Describe the project. Remind students of the • Purpose of the study • Who is being interviewed and why • What will be done with the data • How long the interview will take • Confidentiality • Thank them at the end of the interview

Interview Questions:

1. Think about your study in English this term. What have you learned about reading and writing in English?
2. Think about your study in Science this term. What have you learned about reading and writing in Science?
3. Think about your study in SOSE this term. What have you learned about reading and writing in History?
4. Think about your study in English this term. What have you learned about reading and writing in English? (Could also apply to other subjects)
5. What types of activities have helped to prepare you for your assessment in each subject?
6. What do teachers need to know about you as a learner to be able to assist you in your writing?
7. Do you think it is important to discuss how to read in write in each of your subjects? Why or why not?

Appendix 5: *Term 4 Science Assessment Task*

Investigating Plant and Animal Cells

Year 8 Science **Term 4 2013**

Student's Name:_____ **Teacher's Name:**_____

Issue Date: Week 10, Term 3

Draft Dates: Week 4, Term 4

Due Date: Week 6, Term 4

Knowledge Science Understanding	Knowledge Science as a human endeavour	Overall

Genre and style: Factual scientific report written in passive voice / third person

Assessment task: Investigating plant and animal cells

This will include:

1. A diagram and analysis of the structure of two specialised plant or two specialised animal cells that is related to their function
2. How understanding plant or animal cell function contributes to developments in health treatments.
3. A scientific report

Recommended Length: 500 words

Student Task Sheet

The investigation should include responses to the following **three** sections:

Section one - Specialised plant or animal cells

1. Select two specialised plant cells **or** animal cells with different functions. The plant cells may be root hair cell, guard cell, xylem or phloem cells. The animal cells may be muscle, nerve, blood, kidney or liver cells.
2. Draw a scientific diagram of the two specialised cells.
3. Describe the structure and function of the two specialised cells.
4. Research the placement and number of specific organelles in each specialised cell.
5. Analyse each cell by relating the function of the specific organelles to the overall function of the specialised cell.
6. Explain why different cells have both similarities and differences in organelle and structural features.
7. Evaluate the importance of cell specialisation in the functioning of a multicellular organism.

Section two - Understanding plant or animal cells for better health

1. Select **one** of your chosen cells from Section One to research (ie. **one** specialised plant cell **or one** specialised animal cell. This **MUST** come from section one above).
2. Research and explain the cell's function in the organism.
3. Identify potential problems that can affect the function of a specialised cell and the consequences for the organism (e.g. Understanding that human pancreatic cells may be damaged affecting insulin production which results in type 1 diabetes. A fungal infection in leaf cells called 'leaf spot' destroys chloroplasts preventing photosynthesis.)
4. Outline how the application of scientific understanding leads to treatments being used to address these problems (e.g. To treat type 1 diabetes insulin injections are required. To treat leaf spot spray the plant with a fungicide to kill the fungus.)

Section three – Written Report – Investigating plant and animal cells

Genre: Factual report, passive voice / third person
Recommended length: 500 words

Introduction:

- Introduce the two specialised cells being investigated

Body:

Paragraph one: (cell structure and function)

- Describe the structure and function of each cell
- Draw a detailed diagram for each cell.

Paragraph two: (organelles and cell function)

- Identify the organelles in each cell and where they are located.
- Compare any differences in the placement of organelles in each cell.
- Justify the placement of specific organelles for cell function.

Paragraph three: (cell function and the organism)

- Select ONE cell and explain the cell's function in the organism.
- Why is this cell important for the organism?
- Could the organism survive without it?
- Identify problems that can have an effect on the function of the cell.
- What are the consequences for the organism?
- Identify treatments being used to address these problems.

Conclusion:

- Summarise the structure and function of each cell.
- Link the cell function to disease and treatments.

DRAFT

Report Section	Detail	Student Response
Introduction	Introduce the two specialised cells being investigated	
Paragraph one Cell structure and Function	Describe the structure and function of each cell	

	Draw a detailed diagram for each cell.	
Paragraph two <u>Organelles and cell function</u>	Identify the organelles in each cell and where they are located.	
	Compare any differences in the placement of organelles in each cell.	_____ _____ _____ _____ _____

	Justify the placement of specific organelles for cell function.	

Paragraph three Cell function and the organism	Select ONE cell from your report and explain the cell's function in the organism.	
	Why is this cell important for the organism?	
	Could the organism survive without this cell type?	
	Identify problems that can have an effect on the function of the cell.	
	What are the consequences for the organism?	
	Identify treatments being used to address these problems.	

Conclusion	Summarise the structure and function of each cell	
	Link the cell function to disease and treatments	

	Knowledge and Understanding	***Investigating Science***	***Communicating***
	Describes the structure and function of two different types of cells Explains how scientific knowledge has been used to identify treatments that affect an organism's health	Researches information regarding cells, potential problems and treatments	Uses scientific and everyday language and representations (Sections 1,2&3)
A	➢ Justifies the distribution of organelles in two different types of cells and relates this to the function of the cell in an organism. ➢ Links cell function and the application of scientific understanding that leads to treatments to address health	➢ Applies researched information to make meaningful interrelationships between organelles, the function of the cell, potential problems and treatments	➢ Uses appropriate scientific language and representations
B	➢ Explains the distribution of organelles in two different types of cells ➢ Suggests an appropriate treatment to control the problem.	➢ Applies researched information to relate organelles, the function of the cell, potential problems and treatments	➢ Mostly uses appropriate scientific languages and representations
C	➢ Describes the structure and function of two different types of cells ➢ Identifies a problem and its effect on the organism.	➢ Uses researched information to relate organelles, the function of the cell, potential problems and treatments	➢ Uses scientific and everyday language and representations
D	➢ Provides a diagram and identifies the organelles in a cell ➢ Identifies a potential problem that can affect the cell	➢ Uses researched information to explain organelles, the function of the cell, potential problems and/or treatments	➢ Uses everyday language and representations
E	➢ Describes a cell ➢ Makes statements about a cell and its function	➢ Uses information to discuss cells	➢ Makes statements

Feedback:

Appendix 6 – *Science Exemplar*

Investigating Plant and Animal Cells

I've chosen pancreatic cells, because there are two different types of cells that perform different functions. I also researched the stomach and intestines for their cell types, finding they had some cells that performed similar functions to the pancreas, particularly in aiding digestion of food. I thought it would be interesting to look at the cell types that produce different functions in the pancreas.

Step One: Introduction

Purpose: To introduce the two specialised cells being investigated.

The introduction should always provide the context for what you are writing about. You basically tell you reader what you are studying, and why it is important to read about.

For the introduction, I've taken two different approaches. The first one focuses on the pancreas. The second introduction focuses on the importance of cells in all living things, including the pancreas.

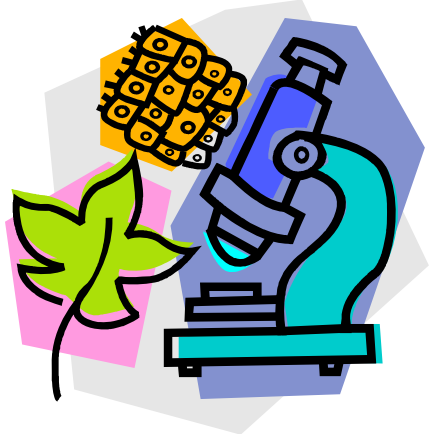
Which do you prefer? Be prepared to discuss your choice with the rest of the class, using evidence from the text.

Introduction 1:

The pancreas is a gland that performs important functions in the body. The pancreas is important in the digestive system, as it produces enzymes that break down food, as well as hormones that help maintain blood sugar levels. These different functions of the pancreas are supported by different cells.

Introduction 2:

All living things need cells to function. Cells are sometimes referred to as the building blocks of life because they are the smallest unit of life. Cells are important in the function of all major organs and glands in the body, including the pancreas.



Structure and function of each cell

Purpose: Describe the structure and function of each cell. Draw a detailed diagram of each cell.

Draft 1

The pancreas has two types of cells: Islets of endocrine cells (endo – within) called Islets of Langerhans, which produces and secrete hormones; and exocrine cells (exo – outside) called acinar cells that produce chemicals called enzymes. These enzymes transport chemicals that will exit the body through the digestive system. Enzymes are secreted in the duodenum and assist in the digestion of food.

Draft 2

The pancreas has two different types of cells: Islets of Langerhans, and acinar cells (Fig. 1). Islets of Langerhans are endocrine cells (endo – within) that secrete hormones including insulin, glycogen, stomostotatin, and pancreatic polypeptide. These hormones are secreted into the bloodstream where they combine to maintain proper sugar levels and provide energy for the body. The acinar cells, on the other hand, are exocrine (exo – outward) cells of the pancreas that produce chemicals call enzymes. These enzymes aid in the digestion of food by transporting chemicals that will exit the body through the digestive system.

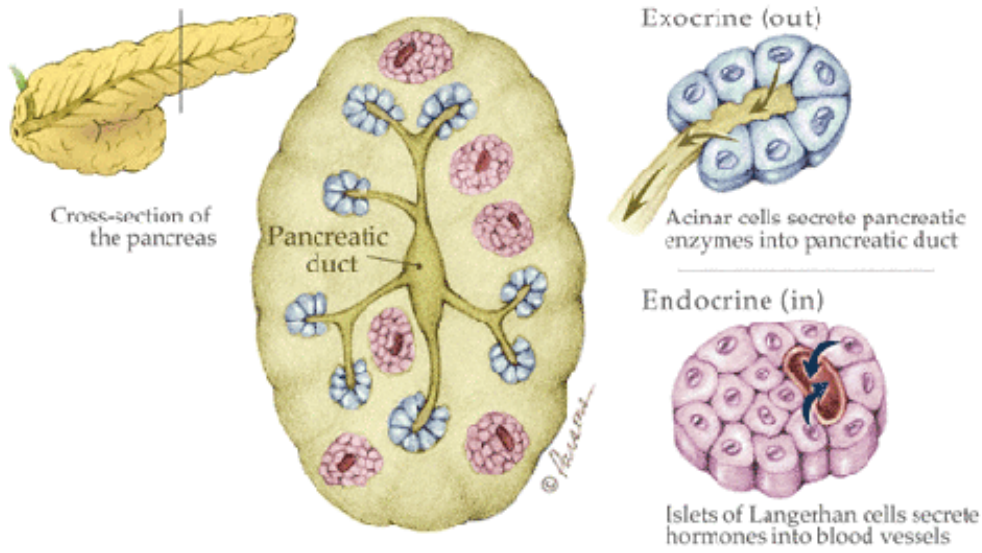


Figure 1 - Pancreatic Cells: Islets of Langerhan and Acinar cells.

Which version do you think is better? Why? Be prepared to justify your choice using evidence from the text. Draft your introduction and first paragraph

Paragraph Two: Organelles and cell function

- **Identify** the organelles in each cell and where they are located
- **Compare** any differences in the placement of organelles in each cell.
- **Justify** the placement of specific organelles for cell function.

The organelles of the Acinar cells and the Islets of Langerhans cells of the pancreas are structured differently, because the cells perform different functions. Figure 2 shows the organelles or parts of cells that work together to keep people healthy and functioning properly. The inner cells of the pancreas, the Islets of Langerhans, are made up of clusters of cells that secrete hormones, including glycogen and insulin. The Islets of Langerhans are darker than other pancreatic cells, because they are crossed by a dense network of capillaries, allowing secretions to go directly into the bloodstream. This is evident in Figure 3, which shows the alpha (glycogon) beta (insulin), delta (somastin) and polypeptide cells, as well as capillaries for carrying hormones. In contrast to this, the outer cells of the pancreas – the Acinar cells – secrete enzymes into the small intestine to aid digestion. An important difference is that Acinar cells have more Rough Endoplasmic Reticulum and golgi, as demonstrated in Figure 4. This is because the Rough Endoplasmic Reticulum system modifies and transports proteins that have been newly manufactured as a result of the secretion of enzymes. The golgi are also more dominant in acinar cells because the golgi store proteins. Therefore, the main differences in the organelles of the of pancreatic cells is that the Islets of Langerhans have a greater number of blood capillaries for the secretion of hormones directly into the bloodstream, whereas the Endoplasmic reticulum and golgi are more dominant in acinar cells to allow the transportation and storage of proteins.

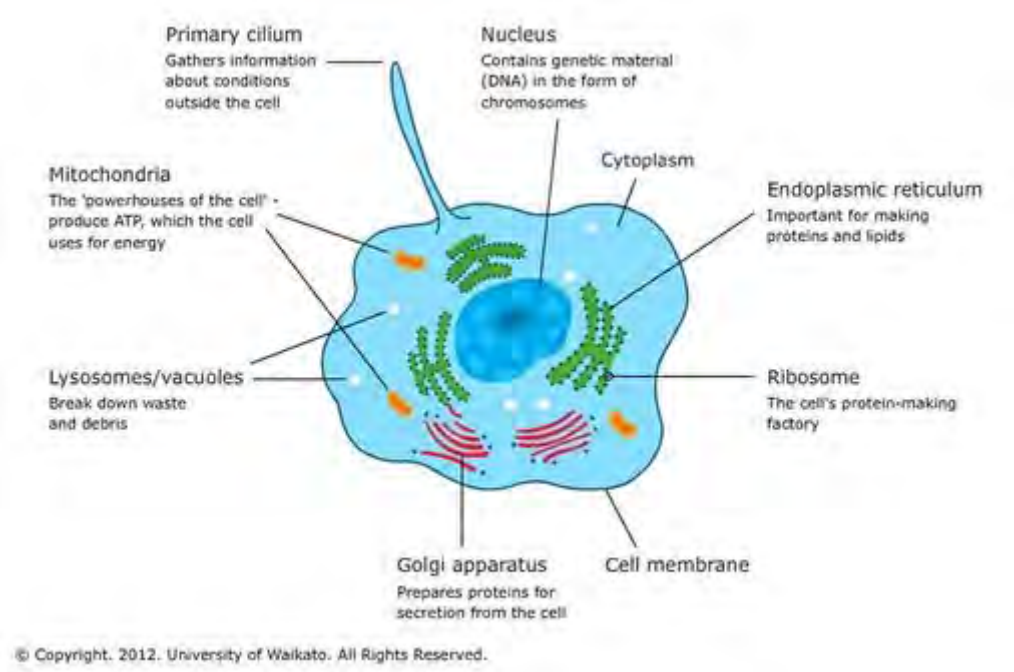


Figure 2 – Organelles of the cell

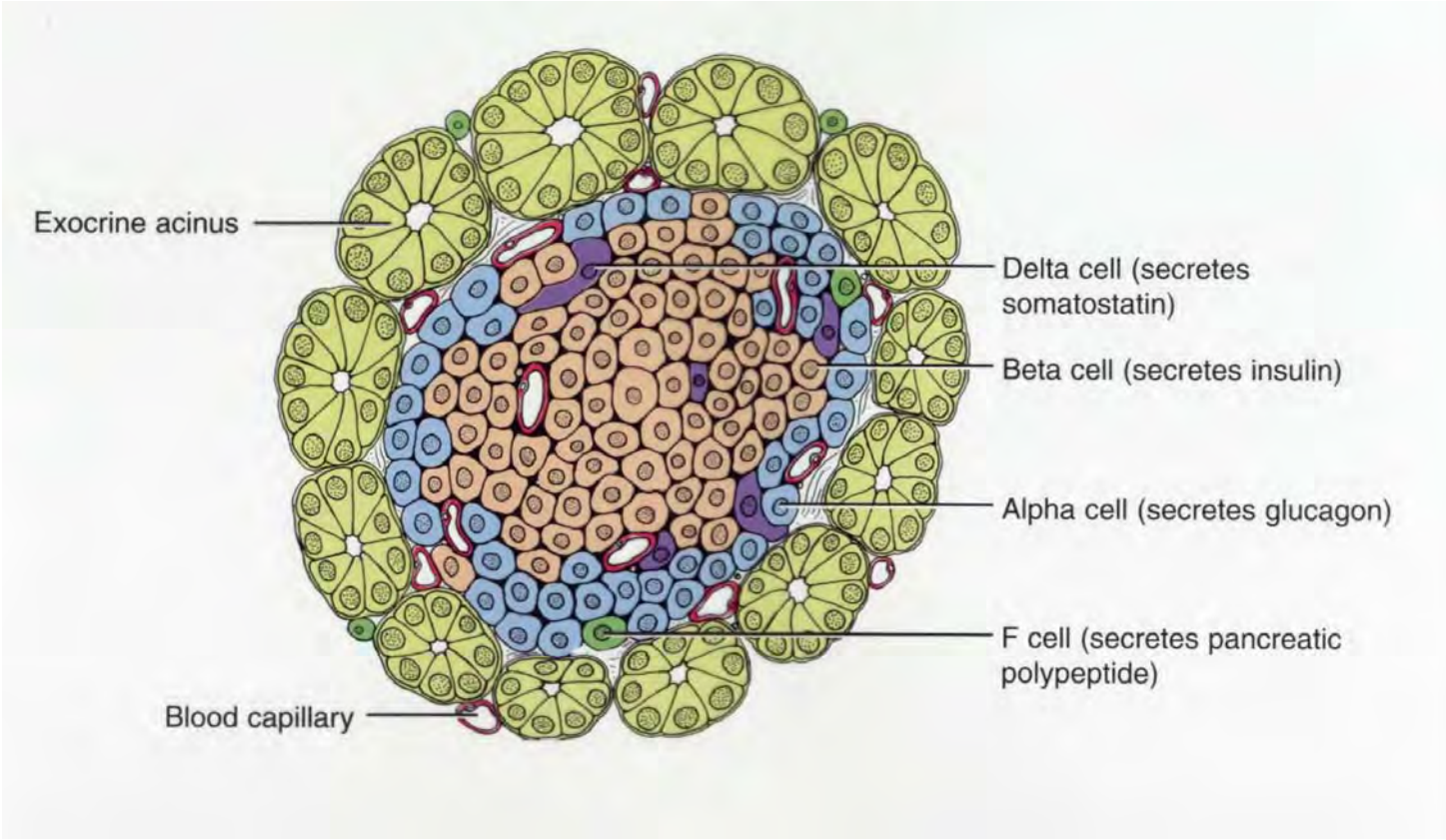


Figure 3 - Islets of Langerhans organelles

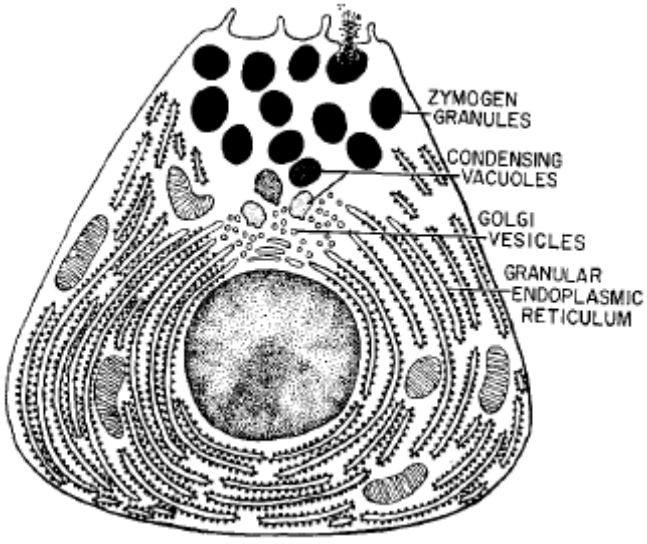


Figure 4 – Organelles of acinar cells

Paragraph 3 – Cell function and the organism

- **Select ONE** cell from your report and explain the cell's function in the organism.
- **Why** is this cell important for the organism?

- **Could** the organism survive without this cell type?
- **Identify** problems that can have an effect on the function of the cell.
- **What** are the consequences for the organism?
- **Identify** treatments being used to address these problems

Islets of Langerhans cells are vital to the pancreas and the body as they produce insulin, which helps regulate the level of sugar in the blood. This blood sugar – or glucose – rises after a meal, and the pancreas responds by releasing insulin, which aids in the absorption of glucose so that it can be converted in energy. Without the production of insulin, Diabetes develops, as glucose builds up in the blood instead of being absorbed. In Type 1 Diabetes, the beta cells no longer produce insulin, because the body's immune system treats the beta cells as bacteria or viruses to be destroyed. Therefore, people with Type 1 Diabetes must take insulin daily to live and closely monitor their blood sugar levels and diets. Type 2 Diabetes usually begins with a condition where the body has trouble using insulin effectively, often as a result of a diet high in sugar and fat. Over time, insulin production declines so sufferers also have to monitor their insulin levels to live. Without insulin to regulate blood sugar levels, diabetes sufferers face the potential of loss of limb and organ functions, including eyesight, as well as lapsing into a coma, or even death. Apart from daily insulin injections and diet control, sufferers can undertake a medical procedure called Pancreatic islet allo-transplantation, a procedure in which islets from the pancreas of a deceased organ are transferred into another person. This procedure is currently classed as experimental, with some patients requiring two or more transplants to obtain enough functioning islets to reduce their need for insulin injections. It is clear that without healthy pancreatic cells, including Islets of Langerhans cells, the body cannot function, and results may be catastrophic.

Paragraph 4 – Conclusion

- **Summarise** the structure and function of each cell.
- **Link** the cell function to disease and treatments.

The pancreas is an important gland in the body that controls our blood glucose levels, as well as the development of enzymes that aid in digestion. The inner cells of the pancreas, the Islets of Langerhans clusters, secrete hormones directly into the bloodstream, including insulin and glycogen, to regulate blood glucose levels. On the other hand, acinar cells, the outer cells of the pancreas, manufacture and transport proteins into the small intestine to assist digestion. Without healthy Islets of Langerhans cells, the body cannot produce insulin, and people develop Type 1 or Type 2

Diabetes. Both forms of diabetes can be controlled with daily injections of insulin, as well as monitoring of diet. Current research shows there may be hope for long-term diabetes sufferers, with the possibility of transplanting healthy islets into patients to reduce their need for daily injections. Without healthy pancreatic cells, the human body requires medical intervention to survive, highlighting the importance of the pancreas in maintaining normal human functions.

Appendix 7 – *History Assessment Task*

Curriculum into the classroom

History – Shogunate Japan	Year 8	DS2

Research assignment - Shogunate Japan Emakimino (picture scroll)

Name:	Teacher:
Class:	Date:

TASK

Create a Japanese picture scroll – an emakimono which explains the significance of an individual, incorporating key influences on his/her life and major impacts he/she had on wider society.

Your scroll should roll from right to left in the fashion of Japanese emakimono and be illustrated by hand or with digital images. Written text (descriptions and explanations) should accompany your illustrations. Both the illustrations and the text must be based on and include historical facts, terms and concepts, and incorporate historically accurate images and symbols.

Provide evidence of your research journey by producing a record of research (by hand or electronic). Here you need to demonstrate that you have developed questions to frame your inquiry, and selected, organised and analysed information from a range of primary and secondary sources on which to base your scroll and narration.

CONDITIONS

- 500-600 words
- Bibliography – minimum of five (5) reliable sources
- Record of research
- Seven class lessons for research and production

TOPIC SELECTION

Choose one of the following individuals from shogunate Japan. These are just suggestions. Check with your teacher if you would like to study an individual not on the list.

Individual
Murasaki Shikibu (c.973-1014/1025) Female novelist & poet
Minamoto no Yoshiie (1039-1106) Legendary samurai
Minamoto no Yoritomo (1147-1199) First shogun
Hojo Masako (1156-1225) Wife of first shogun & mother of second & third shogun
Ashikaga Takauji (1305-1358) Founder and first shogun of the Ashikaga clan
Sen no Rikyu (1522-1591) Master of tea
Oda Nobunaga (1534-1582) Powerful general
Toyotomi Hideyoshi (1536-1598) Powerful general
Tokugawa Ieyasu (1543-1616) First Tokugawa shogun
Matsuo Basho (1644-1694) Male poet
Katsushika Hokusai (1760-1849) Male artist
Sakamoto Ryoma (1835-1867) Anti-Tokugawa samurai
Takamori Saigo (1828-1877) 'Last great samurai'
Tokugawa Tsunayoshi (1646-1709) Dog shogun

FRAME AND FOCUS YOUR INQUIRY

Use the following template to help you develop a key question which will frame and direct your historical inquiry.

What is the historical significance of (*insert nationality, credentials and name of individual, and provide life dates in brackets)*?

For example: What is the historical significance of Japanese Emperor Meiji (1852-1912)?

Year 8 History: Shogunate Japan — Guide to making judgments

Purpose: To create an emakimono which explains the significance of an individual in shogunate Japan, incorporating life influences and the impact of this individual on wider society, and to provide a record of research.

	Assessable elements	Task-specific assessable elements	A	B	C	D	E
UNDERSTANDING	Historical knowledge & understanding	Demonstrates knowledge & understanding of significance & cause and effect	Demonstrates a comprehensive and thorough knowledge and understanding of: • significance of individual • key life influences and impacts of individual on wider society	Demonstrates a thorough knowledge and understanding of: • significance of individual • key life influences and impacts of individual on wider society	Demonstrates a sound knowledge and understanding of: • significance of individual • key life influences and impacts of individual on wider society	Provides information about an individual and some achievements	Provides basic facts about a an individual
SKILLS			A	B	C	D	E
	Questioning & researching	Develops questions & locates sources in a record of research	Develops discerning research questions (key and sub) to direct a historical inquiry Identifies and locates a range of relevant and reliable primary and secondary sources in a record of research	Develops valid research questions (key and sub) to inform a historical inquiry Identifies and locates relevant and mostly reliable primary and secondary sources in a record of research	Develops questions (key and sub) to frame a historical inquiry, makes reference to these during a historical inquiry Identifies and locates useful secondary sources in a record of research	Poses a research question at the start of a historical inquiry Identifies and locates, with assistance and/or locates some general non-credentialed internet sources	Identifies a focus for research Locates a general source in a record of research
	Analysing & interpreting	Analyses, selects & organises information in a record of research & scroll	Effectively analyses, selects and organises relevant information from sources to use as evidence to answer inquiry questions in a picture scroll and record of research	Analyses, selects and organises relevant information to use as evidence from sources to answer inquiry questions in a picture scroll and record of research	Analyses, selects and organises information from sources to use as evidence to answer inquiry questions in a picture scroll and record of research	Records information in a in a picture scroll and record of research	Lists information in a picture scroll or record of research

	Communicating	Communicates findings in scroll using historical terms & concepts, & acknowledges sources	Communicates clearly and purposefully using visual sources and written text (descriptive and explanatory) that meaningfully incorporate historical terms and concepts Accurately acknowledges sources in a bibliography using a recognised referencing system	Communicates effectively using visual sources and written text (descriptive and explanatory) that appropriately incorporates historical terms and concepts Acknowledges sources in a bibliography using a recognised referencing system	Communicates using visual sources and written text (descriptive and explanatory) that uses some historical terms and concepts Acknowledges sources in a bibliography	Presents visual sources & written text using some historical terms or concepts Mentions some historical sources	Presents visual sources & written points which mention a historical term or concept Makes a fragmented reference to a source

Appendix 8 – *History Exemplar*

Year 8 History – Exemplar

<table>
<tr><td colspan="2">Slide 1: Who was Jandamarra?

Jandamarra , who some claim should be as famous as Ned Kelly, was an Australian Aboriginal Man renowned for leading his people in a rebellion against pastoralists in the Kimberley region in Western Australia during the latter part of the 19th century. Jandamarra, known as “Pigeon” to his white bosses, fought a three-year war starting in 1894 against the Western Australian Police and pastoralists, in defence of his the land and culture of the Bunuba tribe. He achieved notoriety through his skilful evasion of police, which led to beliefs that he had magical powers. Terrified pastoralists abandoned their settlements in fear of Jandamarra, and regarded him as an outlaw. There are conflicting reports of Jandamarra’s age and date of birth; he was born around 1873, and died in 1897, thus would have been in his early to mid-twenties when he died. Jandamarra has been called a “tragic hero” because he was caught in a conflict between Aboriginal people and white settlers.</td></tr>
<tr><td>Point - Topic Sentence</td><td>Jandamarra , who some claim should be as famous as Ned Kelly, was an Australian Aboriginal Man renowned for leading his people in a rebellion against pastoralists in the Kimberley region in Western Australia during the latter part of the 19th century.

Who: Jandamarra//who some claim should be as famous as Ned Kelly//

What: was an Australian Aboriginal man//famous for leading his people //in a rebellion/against pastoralists/

Where: in the Kimberley region /in Western Australia/

When: during the latter part of the 19th century//

// clause break

/ phrase</td></tr>
</table>

Elaboration – *further explanation of who he was and what he did*	Jandamarra, known as "Pigeon" to his white bosses, fought a three-year war starting in 1894 against the Western Australian Police and pastoralists, in defence of his the land and culture of the Bunuba tribe.
Evidence – *why this rebellion was significant*	He achieved notoriety through his skilful evasion of police, which led to beliefs that he had magical powers. Terrified pastoralists abandoned their settlements in fear of Jandamarra, and regarded him as an outlaw. There are conflicting reports of Jandamarra's age and date of birth; he was born around 1873, and died in 1897, thus would have been in his early to mid-twenties when he died.
Linking back (to topic sentence; sum up paragraph)	Jandamarra has been called a "tragic hero" because he was caught in a conflict between Aboriginal people and white settlers.

Slide: What key influences or circumstances shaped Jandamarra?

Version 1

The key influences that shaped Janadamarra were his time spent growing up on sheep stations and working for the police; the mistreatment suffered by the Indigenous at the hands of the authorities and pastoralists; and his initiation into Aboriginal culture and tribal law. Firstly, Jandamarra learnt many skills growing up on Lennard River station, including shearing, shooting and riding horses. He further developed these skills when he worked for the police as a tracker, as well as looking after their horses. Jandamarra was able to use his skills against police and pastoralists when he and other members of the Bunuba tribe began their war against white expansion into their country. Secondly, Jandamarra was also greatly influenced by the mistreatment he and others suffered at the hands of police, which led him to change his attitudes towards white people. Many Bunuba men were arrested for hunting cattle, because their usual food sources, including native fauna ,had been driven out as pastoralists cleared the land. The Aboriginal men were shackled together in chains and marched long distances to Derby jail, where they were sent to labour camps or away on steamships, never to see their families again. The third factor influencing Jandamarra in his decision to mount an attack against whites was his initiation into tribal

<table>
<tr><td colspan="2">customs and laws, where he learnt the value of the land to his people. This made him angry when many sacred sites were destroyed by pastoralists after they established their settlements. Jandamarra was greatly influenced by his time spent working for white settlers and the police, the abuse inflicted upon Aboriginal people by white people, and tribal beliefs about the value of the land, all of which were significant factors in his decision to attack the whites in his effort to drive them out of Bunuba country.</td></tr>
<tr><td>Point - Topic Sentence</td><td>The key influences that shaped Janadamarra were his time spent growing up on sheep stations and working for the police; the mistreatment suffered by the Indigenous at the hands of the authorities and pastoralists; and his initiation into Aboriginal culture and tribal law.</td></tr>
<tr><td>Elaboration and Evidence – First point: what he did; how it influenced him/impacted on him</td><td>Firstly, Jandamarra learnt many skills growing up on Lennard River station, including shearing, shooting and riding horses. He further developed these skills when he worked for the police as a tracker, as well as looking after their horses. Jandamarra was able to use his skills against police and pastoralists when he and other members of the Bunuba tribe began their war against white expansion into their country.</td></tr>
<tr><td>Elaborations and Evidence – second point</td><td>Secondly, Jandamarra was also greatly influenced by the mistreatment he and others suffered at the hands of police, which led him to change his attitudes towards white people. Many Bunuba men were arrested for hunting cattle, because their usual food sources, including native fauna ,had been driven out as pastoralists cleared the land. The Aboriginal men were shackled together in chains and marched long distances to Derby jail, where they were sent to labour camps or away on steamships, never to see their families again.</td></tr>
<tr><td>Elaboration and Evidence – third point</td><td>The third factor influencing Jandamarra in his decision to mount an attack against whites was his initiation into tribal customs and laws, where he learnt the value of the land to his people. This made him angry when many sacred sites were destroyed by pastoralists after they established their settlements.</td></tr>
</table>

Linking back (to topic sentence; sum up paragraph)	Jandamarra was greatly influenced by his time spent working for white settlers and the police, the abuse inflicted upon Aboriginal people by white people, and tribal beliefs about the value of the land, all of which were significant factors in his decision to attack the whites in his effort to drive them out of Bunuba country.

Slide: What key influences or circumstances shaped Jandamarra?

Version 2

The key influences that shaped Janadamarra were his time spent growing up on sheep stations and working for the police; the mistreatment suffered by the Indigenous people at the hands of the authorities and pastoralists; and his initiation into Aboriginal culture and tribal law. Given the "Pigeon" by his boss at Lennard River Station, by the time he was fourteen, Jandamarra was the fastest shearer on the station, was a crack shot with a rifle, and a great horseman who could hit a target standing the stirrups at full gallop. Later, he worked for the police as a tracker and carer of police horses, impressing the police with his speed and agility, boxing skills and talent in taming horses. The skills Jandamarra developed during his time with the pastoralists and police were also used successfully against them when Jandamarra and his fellow tribesman waged their war against the expansion of the whites into their territory. A significant factor influencing Jandamarra's change of attitudes towards the whites was the mistreatment suffered by his people at the hands of the authorities. With the destruction of the habitat of native animals due to the clearing of land by pastoralists, the Bunuba people hunted cattle and sheep to survive. Police arrested the hunters, shackling them in neck chains, and marching them to Derby jail where they were given hard labour or were sent away on steamships, never to return to their country again. Many of the sacred sites and billabongs of the Bunuba people were also destroyed by pastoralists. It wasn't until Jandamarra was educated in tribal customs and laws by his uncle Ellemarra that he mistrust the pastoralists and police he worked for. He learnt the value of the land in the stories his uncle told. Jandamarra's initiation and education was interrupted in his teens when he was arrested and jailed for stealing cattle, and for a time he was shunned by his tribe for breaking tribal laws. However, when Ellemarra and 15 of the Bunuba men were arrested by police for cattle thieving, Jandamarra released the men,

despite working for the police as a tracker at the time. Although Jandamarra was greatly influenced by his white bosses on the sheep stations and in the police force, he was driven to fight against them when he witnessed the mistreatment suffered by his tribesman from the police, and learned about the value of his land and tribal customs, that were being lost due to white settlement.	
Point - Topic Sentence	The key influences that shaped Janadamarra were his time spent growing up on sheep stations and working for the police; the mistreatment suffered by the Indigenous people at the hands of the authorities and pastoralists; and his initiation into Aboriginal culture and tribal law. Point 1: his time growing up on sheep stations Point 2: the mistreatment he suffered by the Indigenous people at the hands of white authorities and pastoralists Point 3: his initiation into Aboriginal culture and tribal law.
Elaboration and Evidence – *First point: what he did; how it influenced him/impacted on him*	Given the "Pigeon" by his boss at Lennard River Station, by the time he was fourteen, Jandamarra was the fastest shearer on the station, was a crack shot with a rifle, and a great horseman who could hit a target standing the stirrups at full gallop. Later, he worked for the police as a tracker and carer of police horses, impressing the police with his speed and agility, boxing skills and talent in taming horses. The skills Jandamarra developed during his time with the pastoralists and police were also used successfully against them when Jandamarra and his fellow tribesman waged their war against the expansion of the whites into their territory.
Elaborations and Evidence *– second point*	A significant factor influencing Jandamarra's change of attitudes towards the whites was the mistreatment suffered by his people at the hands of the authorities. With the destruction of the habitat of native animals due to the clearing of land by pastoralists, the Bunuba people hunted cattle and sheep to survive. Police arrested the hunters, shackling them in neck chains, and marching them to Derby jail where they were given hard labour or were sent away on steamships, never to return to

	their country again. Many of the sacred sites and billabongs of the Bunuba people were also destroyed by pastoralists.
Elaboration and Evidence *– third point*	It wasn't until Jandamarra was educated in tribal customs and laws by his uncle Ellemarra that he mistrust the pastoralists and police he worked for. He learnt the value of the land in the stories his uncle told. Jandamarra's initiation and education was interrupted in his teens when he was arrested and jailed for stealing cattle, and for a time he was shunned by his tribe for breaking tribal laws. However, when Ellemarra and 15 of the Bunuba men were arrested by police for cattle thieving, Jandamarra released the men, despite working for the police as a tracker at the time.
Linking back (to topic sentence; sum up paragraph)	Although Jandamarra was greatly influenced by his white bosses on the sheep stations and in the police force, he was driven to fight against them when he witnessed the mistreatment suffered by his tribesman from the police, and learned about the value of his land and tribal customs, that were being lost due to white settlement.

Appendix 9 – *English Assessment task*

YEAR 8 ENGLISH

Student's name:	**Teacher's name:**
Unit: Indigenous Perspectives	**Genre:** Analytical – response to literature
Length: 300-400 words	**Date:**

Context:

During this term we have read and deconstructed a variety of texts which present indigenous perspectives. We have examined view points, themes and evaluative language within these texts. We have also looked closely at how to take notes and transform these notes into grammatically correct sentences and paragraphs. The following task will enable you to demonstrate what you have learnt this term.

Task:

You are to analyse an excerpt from the picture book "The Rabbits" by John Marsden and Shaun Tan using the attached "Analysis of Text" sheet. You will then use these notes to write a literary response to the text. You will need to write in well-constructed paragraphs. You will need to include specific examples from the text to support your analysis.

Conditions:

- 300-400 words
- In-class assessment
- Students may bring the "Analysis of Text" sheet into the exam
- Assessment handed out at beginning of Week 7 *or* 8
- You will work on this task in class

Year 8 English – Literary Response Criteria Sheet

Assessable Elements	A	B	C	D	E
Knowledge and Understanding of information and text structures	• Discerning **selection, organisation and synthesis of a variety of relevant ideas** and information for a literary response, with effective supporting evidence	• Effective **selection, organisation and synthesis of a variety of relevant ideas** and information for a literary response, with relevant supporting evidence	• **Selection, organisation and synthesis of a variety of relevant ideas** and information for a literary response, with supporting evidence	• **Selection and combination of some ideas** and information for a literary response	• **Limited use of ideas** and information for a literary response
Constructing Texts and Language Features	• **Discerning analysis** of how language features, images and vocabulary are used for purpose, audience and effect: *(including identifying evaluative language*) • Discerning use of a range of vocabulary • Discerning use of a range of grammatical structures including a wide range of clause and sentence structures • Discerning use of a variety of textual features: - conventional spelling and punctuation. - paragraphing.	• **Effective analysis** of how language features, images and vocabulary are used for purpose, audience and effect: *(including identifying evaluative language*) • Effective use of vocabulary • Effective use of a range of grammatical structures, including a wide range of clause and sentence structures • Effective use of a variety of textual features: - conventional spelling and punctuation. - paragraphing.	• **Analysis** of how language features, images and vocabulary are used for purpose, audience and effect: *(including identifying evaluative language*) • Use of a range of vocabulary • Use of a range of grammatical structures, including a wide range of clause and sentence structures • Use of a variety of textual features: - conventional spelling and punctuation. - paragraphing.	• **Some analysis** of how language features, images and vocabulary are used for purpose, audience and effect: *(including identifying evaluative language* • Use of vocabulary with some effect • Use of some grammatical structures, including a narrow range of clause and sentence structures • Use of textual features that vary in suitability: - conventional spelling and punctuation. - paragraphing.	• **Limited analysis** of how language features, images and vocabulary are used for purpose, audience and effect: *(including identifying evaluative language* • Use of a narrow range of vocabulary • Use of a narrow range of grammatical structures • Use of textual features to impede meaning - conventional spelling and punctuation. - paragraphing.
Appreciating Texts and Reflecting on Learning (Valuing Indigenous perspectives)	• Discerning analysis and evaluation of the ways texts represent different viewpoints and perspectives on events, people, situations and issues.	• Effective analysis and evaluation of the ways texts represent different viewpoints and perspectives on events, people, situations and issues	• Analysis and evaluation of the ways texts represent different viewpoints and perspectives on events, people, situations and issues	• Some analysis and evaluation of the ways texts represent different viewpoints and perspectives on events, people, situations and issues	• Limited analysis and evaluation of the ways texts represent different viewpoints and perspectives on events, people, situations and issues

Appendix 10 – *Analysis of Text*

Visual Analysis of Text

Title	
Type of Text	
Reference Details	

Complete the table by filling in your responses.

Focus Questions	Your Response
Whose ideas or viewpoints are expressed in the text?	
What is the author's purpose?	
What subject matter is discussed?	
What issues are being raised?	
What is the main theme or issue?	

Does the author use evaluative language to set up an emotional response in the reader or to influence the reader's attitude towards people or things? Are these negative or positive?

Affect Which words convey an emotional response in the reader?	
Judgment What phrases or words are making judgments about someone's character or behaviour?	
Appreciation What does the author of the text believe is valuable?	

This text is a very visual text. What story do the pictures tell us?

Affect language can be conveyed through images; happiness, unhappiness, security, insecurity, satisfaction, dissatisfaction. What emotional affect do these pictures have on the audience?	

What colours are used? Do they convey a mood? Why were they used?	
Who is pictured? Why?	
How are the pictures laid out on the page? (size, position in the frame) What impression do they give the audience?	
What are people doing? Why are they doing this?	
Posture/body language/hand gestures? What has been used, what impression do they give and how do these add to the story?	
What symbols are used? What do they mean?	

How do the images combine with the language to tell the story? Do they work together?	
How does the text represent a particular aspect of Australia's histories, peoples or cultures?	

Appendix 11 – *Analysis of text sheet used in class*

Analysis of Text **Name: _____**

Title	
Type of Text	
Reference Details	

Complete the table by filling in as many responses as possible. If the text does not have images, leave the question blank.

Focus Questions	**Responses**
Whose ideas or viewpoints are expressed in the text? • Which group or groups are represented in the text? • What issues does it raise?	Author/s: Purpose: Subject Matter: Setting, time and place:
What is the main theme or message of the text?	
Evaluative Language: Does the author use language to set up an emotional response in the reader or influence attitudes towards people or things? Positive or negative?	
Affect (happy, unhappy; secure, insecure; satisfaction, dissatisfaction)	What emotions?
Judgment (special, capable, dependable, honest, good)	People's character?
Appreciation (reaction, composition, valuation)	How does language express the value of things?

How does this text represent a particular aspect of Australia's histories, peoples or cultures?	
If there are images: How does this text combine language and images to position the reader?	

Appendix 12 – *English exemplar*

Text Structure	**"We Are Going" Literary Analysis**	**Language Features**
Introductory Paragraph Title of text Type of text Author Author Background	The poem "We Are Going" was written in 1964 by Oodgeroo Noonuccal (also known as Kath Walker), a famous indigenous author. She is of the Minjerribah people of South Stradbroke Island. Oodgeroo Noonuccal wrote this poem to describe the plight of indigenous Australians in the 1960's. It raises the issue of dispossession – indigenous people being forced from their traditional lands. It also refers to the lack of respect shown towards indigenous sites by non-indigenous Australians. Throughout the entire poem, the culture and way of life of indigenous Australians is continually referred to, highlighting their very strong relationship with the land.	Present Tense Field – technical Tenor – formal Mode - written
Body Paragraph 1 Purpose Subject Matter Setting/Time/Place	The main theme of the text revolves around loss. Indigenous Australians lost their traditional lands and as a result of this they experienced the devastating loss of their culture and identity.	Text Connectives e.g. also, throughout High modality e.g. very strong
Body Paragraph 2 Theme/Message of Text	The author uses evaluative language to evoke a negative emotional response from the reader. In terms of affect language, indigenous people are represented as feeling sad, despondent, alienated and lost. The line "Gone now and scattered" highlights these emotions. "White Men" are represented as uncaring and oblivious to the indigenous people's plight.	Cohesion e.g. …and as a result of this… High modality e.g. devastating
Body Paragraph 3 Evaluative Language - Affect	Many judgments are made throughout the poem and examples of these will now be discussed. A negative judgement is made about the white people when the author indicates that white people are rushing around not respecting indigenous sites (in lines four and five). The line, "We are as strangers here now, but the white tribe are the strangers" contains further judgement - indigenous people feel like strangers in their own land but they really believe that the white people are the strangers. Throughout the poem there is an ongoing judgment made that indigenous people "are the land" however they have become invisible and forgotten.	Lines from poems in quotation marks
Body Paragraph 4 Evaluative Language – Judgment	The author uses language of appreciation to describe indigenous people's relationship with the land and environment. Examples of this include "…the quiet daybreak paling the dark lagoon", "…the wandering campfires" and "…the shadow ghosts creeping back as the camp fires burn low". Appreciation language is also used to describe indigenous dispossession – "A semi naked band subdued and silent". In conclusion, this poem is successful in highlighting the issues of land rights and dispossession faced by indigenous Australians in the 1960's.	Text connectives e.g. but, throughout
Body Paragraph 5 Evaluative Language - Appreciation	(364 words)	
Conclusion What aspect of Australia's histories, peoples for cultures are represented?		Text connectives e.g. in conclusion Judgement words e.g. successful

Analysis of Text **Name: _____**

Title	"We Are Going"
Type of Text	Poem
Reference Details	Oodgeroo Noonuccal, written in 1964

Complete the table by filling in as many responses as possible. If the text does not have images, leave the question blank.

Focus Questions	Responses
Whose ideas or viewpoints are expressed in the text? • Which group or groups are represented in the text? • What issues does it raise?	Author/s: Oodgeroo Noonuccal (Kath Walker) from Minjerribah people – South Stradbroke Island Purpose: To explain what was happening to indigenous people throughout Australia in the 1960's Subject Matter: indigenous sites not respected by non-indigenous Australians; indigenous tribe numbers dwindling; indigenous people forced from the land; culture/way of life of indigenous Australians Setting, time and place: 1960's Australia
What is the main theme or message of the text?	Indigenous Australians experienced loss of traditional lands and as a result of this – loss of culture and identity
Evaluative Language: Does the author use language to set up an emotional response in the reader or influence attitudes towards people or things? Positive or negative?	
Affect (happy, unhappy; secure, insecure; satisfaction, dissatisfaction)	What emotions? Indigenous people - Sad, despondent, alienated, lost "White Men" – uncaring, oblivious
Judgment (special, capable, dependable, honest, good)	People's character? • White people rushing around not respecting indigenous sites (lines 4 and 5) • Indigenous people feel like strangers in their own land but think that white people are really the strangers ("We are as strangers here now, but the white tribe are the strangers") • Indigenous people "are the land" but have become invisible/forgotten
Appreciation (reaction, composition, valuation)	How does language express the value of things? • Author uses appreciation language to describe indigenous people's relationship with the land/environment e.g. "…the quiet daybreak paling the dark lagoon"; "…the wandering campfires"; "…the shadow ghosts creeping back as the camp fires burn low" • Appreciation language used to describe indigenous dispossession e.g. "A semi naked bank subdued and silent"
How does this text represent a particular aspect of Australia's histories, peoples or	Written to highlight the issue of indigenous land rights in the 1960's and the 'movement' of indigenous people from their traditional lands

cultures?	
If there are images: How does this text combine language and images to position the reader?	--